

FERNAND MAURETTE

EVERYONE'S GEOGRAPHY OF FRANCE



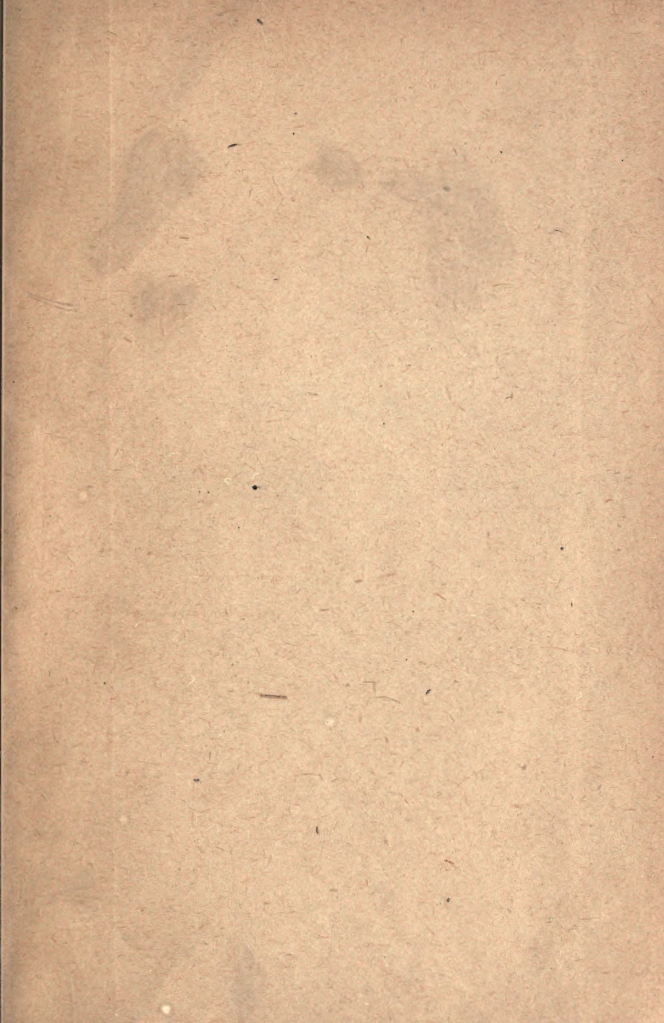
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EVERYONE'S
GEOGRAPHY OF FRANCE

ENGLISH AND AMERICAN READER

In this little book written specially for you, to be, as we hope, your practical daily companion, you will find all indispensable information on the whole of the French Land.

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EVERYONE'S GEOGRAPHY OF FRANCE

TRANSLATED BY M. TH. MAURETTE

WITH 413 ILLUSTRATIONS, PLANS AND MAPS



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1919

1822



1822

CONTENTS

	Pages
FOREWORD	IX
INDEX	X

PART ONE

Soil and Population.

I. Some general ideas about France.	1
II. Relief of France.	2
III. Seas and Coasts of France	14
IV. Climate and Flora.	20
V. The Rivers of France	25
VI. The French Nation	31
VII. The French Population	33

PART II

The Natural Divisions of France.

I. The Région de l'Est (Eastern Region).	35
II. The Région du Nord (Northern Region).	41
III. The Champagne.	46
IV. Picardie (Picardy)	51
V. Normandie (Normandy)	55
VI. Paris and its Surroundings	60
VII. Pays de la Loire.	66
VIII. Bretagne (Brittany)	70
IX. The Pays de l'Ouest (Western Lands).	74
X. The Massif Central	79
XI. The Bassin Aquitain	89
XII. The Pyrénées	95
XIII. The Alps	100
XIV. The Jura	107
XV. The Bassin Rhodanien.	110
XVI. The Mediterranean Region	116

PART III

The French Nation

Political Organisation and Commercial Life.

I. Organisation of the State.	125
II. Roads, Railroads and Waterways	131
III. Agriculture, Forestry and Fishing.	136
IV. Industry	139
V. Commerce	143
VI. French Colonies	145
CONCLUSION	149

MAPS AND GRAPHICS

	Pages.		Pages.
Shape of France and its frontiers	1	Rouen and its suburbs	58
Relief of France.	2	Map showing the convergence of the waterways and railways towards Paris	60
The Massif Central	3	The strong place of Paris and the surrounding forts.	64
The Pyrénées	6	Paris and its suburbs	66
The Alps	8	The Brittany	71
The Jura	9	The roads of Brest.	74
The Vosges	11	The Western Region.	75
The Ardenne	12	Saint-Nazaire and the Loire's estuary. Nantes	77
The Bassin Parisien	13	The Massif Central	80
Mean monthly temperature in Paris and Montreal compared.	21	The Saint-Etienne Basin	83
Rainfall-Map of France.	22	The Mountains of Auvergne	85
Annual quantity of rainfall and number of rainy days in the year, in some French towns.	23	The Limagne	87
Map showing the main cultures of France	24	The coalfields of the Massif Central.	88
Waterways of France.	26	The Bassin Aquitain.	90
Mileage and volume of water of the four largest waterways	27	The vineyards of Bordelais.	93
Population of France.	34	Bordeaux and the Gironde	94
The Eastern Region	36	The Pyrénées	96
The Northern Region	42	The Alps	101
Waterways of the Northern Region	44	Cattle and sheep compared in the Alps of Savoie, Dauphiné and Provence	106
Northern coal-field.	44	The Jura.	107
The Pas de Calais.	45	The Bassin Rhodanien and the Mediterranean Region.	111
The Bassin Parisien	47	The Trouée de Belfort	112
Grouping of population in Champagne	50	The vineyards of Burgundy.	113
The vineyards of Champagne.	51	The vineyards of the Bas-Languedoc	117
Le Havre and the Seine's estuary	56	The Delta of the Rhône during the Roman Empire and now	118
		The harbour of Marseille.	121

	Pages.		Pages.
The naval base of Toulon	122	Comparative industrial pro-	
Corsica	123	duction before the war.	140
Railways of France, United		Imports and exports before	
Kingdom, United States of		the war.	143
America, etc	134	The French Colonies.	147
Comparative mean produc-		Area, population and com-	
tion of wheat and wine		merce of the French Co-	
(1905-1914)	136	lonies.	148

ILLUSTRATIONS

The Chaîne des Puys, in the		The Seine in Paris.	27
Massif Central.	4	The Loire in Tours	28
The Causse du Bramabiau,		The Garonne in Bordeaux	29
in the Massif Central :	5	The Rhône in flood, in the	
View of the Central Pyrénées		neighbourhood of Avignon	30
taken from Ax-les-Thermes	5	The Valley of Longemer and	
View of the Mont-Blanc, in		Retournemer, in the Vos-	
the Alps, taken from Sal-		ges	37
lanches	7	The Hauts-de-Meuse, at Hat-	
The Valley of Baume-les-		tonchatel	39
Messieurs, in the Jura	10	The Meuse at Joigny, in the	
The Ballon d'Alsace, in the		Ardenne	40
Vosges	11	The Mont-Aigu in Flandre	43
The Dunes of Berck, on the		The Plain of Champagne.	48
Channel.	14	The Falaise of Ile-de-France,	
The Cliffs of Etretat in the		at Vertus	49
Pays de Caux, on the		The Plateau of Picardy	52
Channel.	15	The " Hortillons " of the	
The Coast of Brittany at		Somme	53
Saint-Briac, on the Chan-		The Mansion-House of Arras	54
nel.	16	A Valley in the Pays d'Auge	
Salt-marshes in the Island of		(Normandy)	57
Ré, on the coast of Cha-		The naval base of Cherbourg	59
rentes (Atlantic Ocean).	16	A farm-house in Brie	61
The Cliffs of the Pyrenean		The Beauce.	61
seaboard, near Saint-Jean-		The Forest of Villers-Cotte-	
de-Luz, on the Atlantic		rets.	63
Ocean	17	The Castle of Chantilly.	63
The Mediterranean seaboard:		Paris: The Avenue des	
Cette	18	Champs-Élysées and the	
The " Calanque " of Sormiou,		Arc de Triomphe	65
in Provence, on the Medi-		The Sologne.	68
terranean Sea	19	The Champagne Berrichonne	69

	Pages.		Pages.
The Valley of Lé Guér, near Lannion, in Brittany. . .	72	Port-Vendres, on the Mediterranean Sea, at the farthest Eastern end of the Pyrénées	99
A harbour on the Brittany coast : Saint-Malo	73	The Grand Som in the Char treuse Range	103
The Marais (Marsh) Vendéen, or Poitevin	78	The winding route from Lautaret to Galibier, in the Alps of Dauphiné	105
Pasture-land in Charolais. . .	81	Nantua, in the Jura	108
Flock of sheep on its way to summer pasture-land, crossing the Pass of Seyrre-rede (Cevennes)	82	Besançon	109
Le Puy, in Velay	84	The vineyards of the " Côte d'Or " in Burgundy, near Meursault.	114
Pasture-land in High Auvergne, at the foot of Puy de Sancy.	86	Lyon	115
A cheese-cellar in Roquefort (in the Causses)	89	The banks of the Gardon, tributary of the Gard.	116
Shepherds in the Landes. . .	92	The village of Gourdon, in the inland part of Provence	117
The Docks of Bordeaux . . .	95	The Road of Villefranche, on the Provençal coast. . .	119
Cauterets, in the Pyrénées . .	97	The Terraces of La Turbie, in Provence.	120
The Plain of Roussillon and the town Elne.	98		

TO OUR ALLIES AND FRIENDS

This little book will show you France as she was in the year 1914, before the Great War. The landscapes of our provinces, their crops, their industries, the number of inhabitants in the towns, all the figures referring to trade and production bring us back to the year 1914.

War has changed neither the soil, nor the climate, nor the rivers, nor the aspects of our country. But if you happen to sojourn in the interior, far from the battle-fields, you will see how it has changed some of our towns and rural districts. Many factories for the production of war material have been built in our mountain valleys, on our river banks, in our little provincial towns. Some of our harbours have been transformed so as to receive the soldiers of our allies and their supplies. Some humble city, which in this book counts only 40 or 50,000 inhabitants, now contains more than 100,000.

And if you go to the theatre of the war, you will see what the Huns have made of some of our smiling countrysides, of some of our oldest cities, of our thriving factories.

But all this will pass. The fiend has been driven back within his own borders, mercilessly crushed by the allied armies. And when the wounds of France have healed, you will find her again such as she is described here, with her varied plains and mountains and her pacific industries, — more open than ever to her friends from over the sea, and ready to tighten with them, each day more than the last, the bonds of friendship and commerce.



INDEX

OF THE WORDS MOST OFTEN USED ALONG WITH NAMES OF PLACES

Baie = bay.

Bas = low.

Bassin = basin.

Canal = channel.

Col = pass.

Colline = hill.

Comté = shire.

Côte (on the sea) = coast.

Côte (inland) = declivity.

Crêt = ridge.

Duché = dukedom.

Falaise = cliff.

Forêt = forest.

Golfe = gulf.

Haut = high.

Ile = isle.

Lac = lake.

Lande = heath, moor.

Marais = marsh.

Massif = ranges.

Mer = sea.

Mont, Montagne = mountain.

Pays = land.

Plaine = plain.

Pic = peak.

Port = harbour.

Rade = road.

Trouée = pass.

GEOGRAPHY OF FRANCE

PART ONE

SOIL AND POPULATION

I.

SOME GENERAL IDEAS ABOUT FRANCE

Position. — France is situated between 42° and 51° North latitude; — that means in the middle of the temperate zone of the world.

Her limits are : 1. north-west and westward : the *North Sea* and the *Pas-de-Calais*, the *Manche* (English Channel) and the *Océan Atlantique* (Atlantic Ocean); 2. southward : the range of *Pyrénées* (Pyrenaean mountains), separating France from Spain, and the *Mer Méditerranée* (Mediterranean Sea); 3. eastward : the *Alpes* (Alps), separating her from Italy ; the range of *Jura*, separating her from Switzerland ; the range of *Vosges*, separating her from Germany ; 4. north-east and northward : a long conventional frontier separating her from Luxemburg and Belgium



SHAPE OF FRANCE AND ITS FRONTIERS.

She is close to England, the straits of Pas-de-Calais being only 31 km. (20 miles) wide, but very far from the United States the

Soil and Population.

Atlantic Ocean being, as the crow flies, 5.080 km. (3.050 miles) wide.

Area and population. — The area of France is of moderate extent : 536.000 kmq. (204.000 sq. m.), 551.000 kmq. or 210.000 sq. m. with Alsace-Lorraine. It is slightly superior to that of the United Kingdom or of Italy, but it is fiftentimes smaller than that of the United States.

France had 39.605.000 inhabitants in 1914 (41.480.000 with Alsace-Lorraine). Her population was slightly superior to that of Italy (34.686.000 inhabitants), slightly inferior to that of the United Kingdom (45.365.000 inhabitants), very far from reaching that of the United States, which contain more than 100 million inhabitants.

The Shape of France. — France is nearly as wide from east to west as from north to south. Its longest distance from E. to W. is 880 km. (555 m.) and from N. to S. 973 km. (608 m.).

So all regions of France are about equally distant from the centre of the country.

II

RELIEF OF FRANCE

Mountains and plains. — France has few high mountains. More than half her territory is under 200 m. (650 feet) above the sea, more than three quarters under 500 m. (1.640 ft.).

The main mountain systems are : in the centre, the *Massif Central* (Central Ranges); southward, the *Pyrénées*; south-



RELIEF OF FRANCE.

Some general ideas about France.

east, the *Alps*; eastward, the *Jura* and *Vosges*; north-east, the *Ardenne*; westward, the *Massif Armoricain* (Armorican Uplands).

Large, open plains separate the Massif Central from the other mountain ranges, which are further removed from the centre. Those are : the *Bassin Parisien*, northward; the *Bassin Aquitain*, south-westward; the *Bassin Rhodanien*, eastward.



THE MASSIF CENTRAL.

Soil and Population.

Those three plains open into one another through narrower plains: the *Seuil du Poitou*, between the Bassin Parisien and Bassin Aquitain; the *Seuil de Naurouze*, between the Bassin Aquitain and Bassin Rhodanien; the *Seuil de Bourgogne*, between the Bassin Rhodanien and Bassin Parisien.

So a belt of plains, sometimes wide, sometimes narrow, but never broken, surrounds the Massif Central.

The Massif Central. — The Massif Central is the broadest of the French uplands: its area is about one sixth of our territory.



Phot. David.

THE CHAÎNE DES PUYs, IN THE MASSIF CENTRAL.

These are comparatively recent volcanoes: some were active at a time when the earth was already peopled. The shape of some craters is still perfectly preserved

It is a region of ridges and uplands of different shapes and altitudes.

1. A number of **round-shaped uplands**, not very high. These are very ancient mountains, which were formed during the primary times of the earth, and have been half-levelled by rivers and weather. Their soil is made of very hard, impermeable and barren rock (granite, sandstone, etc.). Their height varies between 1,400 m. (4,600 ft.), on the east, and 800 m. (2,600 ft.), on the west side. The most conspicuous are: east, the *Morvan*, the *Charolais*, the *Beaujolais*, the *Lyonnais*, the *Cévennes*, the *Montagne Noire* (Black Mountain); in the middle, the *Monts du Forez*, the *Mont Lozère*, the *Rouergue*; west, the *Limousin*. They may be compared to the Pennine Chain in England, or the Apalachian mountains in the States.



THE CAUSSE DU BRAMABIAU, IN THE MASSIF CENTRAL. Phot. Neurdein.

The Causses are limestone tablelands. The limestone strata are nearly horizontal. The valleys have cut deeply through them and can be compared to the canyon of Colorado.



VIEW OF THE CENTRAL PYRENEES TAKEN FROM AX-LES-THERMES.

Note the *sierra* ("saw edge"). The passes, or *ports*, are very high and of difficult access.

Soil and Population.

2. **High mountains** forming the inner part of the Massif Central. Those are old volcanoes, but of a much earlier period (tertiary age); they have not been so much weather-beaten or water-scraped. They are composed of hard igneous rocks (basalt and lava), but those are permeable and fertile. Their more constant shape is that of peaks or *puy*s. Their height varies between 1,500 m. (4,900 ft.) and 1,800 m. (5,900 ft.), or more.

Those mountains are called; the *Monts du Velay* (Mont Mezenc, 1,754 m., 5,753 ft.) and the *Monts d'Auvergne* (Puy de Sancy, 1,886 m., 6,186 ft., highest point in the Massif Central). They



THE PYRÉNÉES.

may be compared to Mount Snowdon, in the North of Wales, or the Oregon, in the States.

3. **Tablelands**, called *Causses*, in the southern part of the Massif Central. Those are limestone tablelands, flat, permeable, separated from one another by deep, narrow valleys, which can be compared to the *canyons* of Colorado. On the east side of the Rouergue are the *Grands Causses* (Great Causses), from 800 to 1,200 m. high (2,600-3,900 ft.); on the west side the *Causses du Quercy*.

4. In some parts, wide **plains** profoundly indenting the Massif Central. Those are the plains of *Limagne* and *Forez*: they open northward on the Bassin Parisien. Their soil is made of the sediment brought down by the rivers from the surrounding mountains. Where the rivers bring fertile mountain soil, the plain is fertile: e. g. *Limagne*, whose sediment has been brought from the *Monts d'Auvergne*. Where the rivers come from barren mountain land, the plain is barren: e. g. the plain of *Forez*, composed of gravel brought from the *Forez* and *Beaujolais* uplands.

The Pyrénées, Alps, and Jura. — The Pyrénées, Alps, and Jura are mountain systems raised in a later geological time. They have been folded from the end of the secondary period till the middle of the tertiary. So they have not been much eroded ; they are still very high. In England, there are no mountain ridges as high as the Alps or Pyrénées ; their shape and height may be compared to that of the Rocky Mountains, in the States.



VIEW OF THE MONT-BLANC, IN THE ALPS, TAKEN FROM SALLANCHES.

The Mont-Blanc (4,810 m., 15,777 f.) is the highest point in Europe. The highest part is perpetually covered with snow, giving birth to numerous glaciers.

1. The **Pyrenees** are 435 km. (272 m.) long and from 60 to 120 km. (37-75 m.) wide. They separate France from Spain. They are composed of a number of parallel ridges and shaped in peaks and sharp abrupt crests, to which they owe their Spanish name of *sierras* (the edge of a saw). The highest point is the *pic d'Aneto* (3,404 m., 11,165 ft.). The other important points are : *Mont Perdu*, *Pic Posets* (in the central part of the range).

Travelling is very difficult in the Pyrénées ; there are no large valleys ; the passes, or *ports*, are high and full of snow during the winter. The lowest and most accessible passes are : the *col de Roncevaux* and the *Somport*, in the Western Pyrénées, and the *Col de la Perche*, in the Eastern Pyrénées.

Soil and Population.



THE ALPS.

2. The **Alps**, in the part where they stand on French territory, are 300 km. (187 m.) long and about 200 km. (125 m.) wide. They separate France from Italy. They are composed of a number of broad and mighty ranges, full of peaks or *dents* (teeth), which are covered with permanent snow on their summits and are the birthplace of numerous glaciers. The highest ranges are on the Italian side, the lowest look on the Rhône valley.

The highest point is *Mont Blanc* (4,810 m., 15,776 ft.), which is the highest summit, not only of France, but also of Europe; it belongs to the *Alpes de Savoie*. Other important ranges are: the *Vanoise*, the *Pelvoux*, in the *Alpes du Dauphiné*; the *Alpes Maritimes* and the *Alpes de Provence*. The Alps are easier to cross than the Pyrénées, for they are cut through by large valleys (for instance, the *Grésivaudan* and the *Maurienne*), and their passes are, in a way, easier to cross than the Pyrenean ones. The main ones are the *Col du Petit Saint-Bernard*, the *Mont-Cenis*¹, the *Mont-Genèvre*, the *Col de Larche* and the *Col de Tende*.

3° The **Jura** is 250 km. (165 m.)



(1) *Mont*, in local language, means *pass*.

Soil and Population.

long, 80 km. (50 m.) wide in its central part, and 35 km. (22 m.) wide towards its extremities. It is composed of a number of parallel ridges, separated from one another by long narrow valleys. Those valleys communicate with each other by transverse cuttings in the ridges. There cuttings are called *cluses*. This structure bears resemblance to that of the Apalachian mountains in the States.

The highest ridges look towards Switzerland. The loftiest



THE VALLEY OF BAUME-LES-MESSIEURS, IN THE JURA.

The parallel limestone strata correspond each other on both sides of the valley.

point is the *Crêt de la Neige* (Snowy Ridge) (1,723 m., 6,651 ft.). Westward, the Jura melts into highlands (*Plateaux*), which slope gradually, stair-wise, towards the Saône-valley.

The Vosges, Ardenne and Armorican uplands. — The Vosges, the Ardenne and the Massif Armoricaïn are very ancient uplands, raised during the primary era. So they have been very much eroded and are not very high, especially the two latter. The Vosges may be compared to the Pennine Chain in England: the Massif Armoricaïn is closely related to Cornwall, which faces it on the opposite coast of the Channel.

1. The **Vosges** stretch between the plain of *Alsace*, which is crossed by the Rhine, and the *Lorraine* uplands, which are cross-

sed by the Moselle and Meurthe rivers. Their main feature is the gentle-sloped, rounded summits, called *ballons* (balloons) or *chaumes*. The highest point is the *Ballon de Guebwiller* (1,426 m., 4,677 ft.). The passes are not easy to cross during the winter (*col de Bus-sang*, *col de la Schlucht*, *col de Saales*). - At each end of the Vosges is a large depression, or *trouée*¹: the *trouée de Belfort* and the *trouée de Saverne*.

2. Only a small portion of **Ardenne** is situated on French territory. This upland slopes

2. *Trouée* is derived from *trou*, which means hole.



THE VOSGES.



THE BALLON D'ALSACE, IN THE VOSGES.

The Ballon d'Alsace is 1,250 m. (4,100 ft.) high. Ancient water eroded mountain. The top is rounded and the slopes are gentle.

Soil and Population.

down towards the South-East. In France it is not more than 400 m. (1,300 ft.) high. A deep valley has been cut through it by the *Meuse* river.

3. The **Massif Armoricain** is in the *Bretagne* peninsula. Its highest point is not more than 391 m. (1,282 ft.) high.

The great French plains. — 1. The largest of our three

plains is the northern one: the **Bassin Parisien**, which is crossed by the *Seine* and the *Loire*. Paris is in this basin.

It opens out on the Channel, on the other side of which is the large English plain with London on it, and called in consequence *Bassin de Londres*. The Bassin Parisien is very like the London Basin: it is a broad plain made of many different soils (limestone, chalk, clay, sand) and lightly broken by a number of low ridges.

In the eastern part of the Bassin Parisien, the hills are

circular and concentric, Paris being in the central part of the circle. They slope abruptly on the outside of the circle; so that an enemy coming from the north-east or the east and marching towards Paris has to face them on their steep side. The most conspicuous of those hills are: the *Côtes de Moselle*; the *Côtes* or *Hauts de Meuse*, the *Argonne* and the *Falaise* (cliff) *de l'Ile-de-France*.

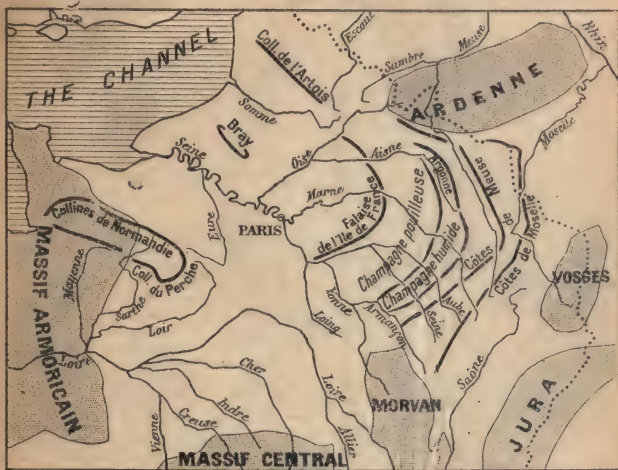
In the western part of the Bassin Parisien, the hill ridges are oriented N.W.-S.E., and perpendicular to the Channel coast line, so that an enemy, coming from the North, from the *plaine des Flandres*, must still face them. The main ones are the *collines de l'Artois*, north of the Somme valley, the *Bray*, north of the Seine valley, and the *collines de Normandie* and the *collines du Perche*, north of the Loire valley.

2. In the south-west of France is another large plain:



the **Bassin Aquitain**, crossed by the river *Garonne*. On it stand *Toulouse* and *Bordeaux*. It is bordered by the **Massif Central** and the *Pyrénées*, and opens out by a gentle slope towards the Atlantic Ocean. On its south side, this slope is broken by the *collines de l'Armagnac*.

3. South-east is the last of our great plains: the **Bassin Rhodanien**, or *Rhône valley*, with *Lyon* and *Marseille* on it.



THE BASSIN PARISIEN.

This basin is not such a perfect whole as the two others. Northward it is a wide plain, crossed by the *Saône* river. In its central part, it is a narrow passage where the *Rhône* flows in a rapid current. Southward, it widens again into a number of broad plains opening out on the Mediterranean Sea: the plains of *Provence* and *Bas-Languedoc* (*Bas* means low).

III

SEAS AND COASTS OF FRANCE

Seas. — France is, with Spain, the only country of Europe looking at the same time towards the two main European



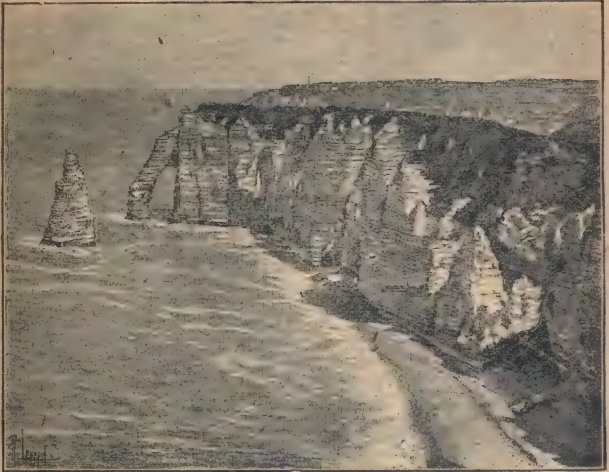
THE DUNES OF BERCK, ON THE CHANNEL.

seas : the Atlantic Ocean and the Mediterranean Sea. Between these two seas, the French territory is like a large isthmus being, in its narrowest part, about 375 km. (235 m.) wide.

Along the French coast, the **Atlantic Ocean** may be divided into a number of secondary seas : 1. The *North Sea*, along which are 75 km. (45 m.) of French coast; 2. The *Pas de Calais*, straits not more than 31 km. (20 m.) wide between the French harbour of Calais and the British harbour of Dover; 3. The *Channel*, which, in its widest part, between the French peninsula of Bretagne

and the British peninsula of Cornwall, is not more than 150 km. (94 m.) wide. The Atlantic Ocean borders a long semi-circular coast of French shore, between the Breton and the Spanish coast. The inner part of this circle is called the *Golfe de Gascogne*. The Spaniards used to call it the *bay of Viscaya* (bay of Biscay).

At the latitude of the French coast, the Atlantic Ocean has not its full width. There are only 5,080 km. (3,050 m.) between the French harbour of Brest, which stands at



Phot Neurdein.

THE CLIFFS OF ETRETAT IN THE PAYS DE CAUX (NORMANDY), ON THE CHANNEL.

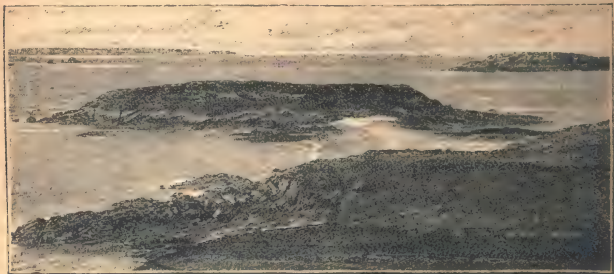
the extreme point of Bretagne, and the harbour of New York.

The **Mediterranean Sea** is no real separation between France and the other two Latin countries : Italy and Spain. There are two main advantages for France in the possession of a Mediterranean coast. 1. It is an opening on one of the great trading routes of the world : the one which, through the Suez Canal, leads from Europe to the Far East. 2. It is but a short crossing (from 24 to 36 hours in a good steamer) from France to its wealthiest colonies : *Algeria* and *Tunisia*.

It is a great boon for France to have these two openings

Soil and Population.

on the roads which lead from Europe to the other two wealthiest regions of the world : America and the Far East.



THE COAST OF BRITTANY AT SAINT-BRIAC, ON THE CH'ANNEL.

The North Sea coast. — The North Sea coast is low and sandy ; it is skirted by marshes, called *polders*, and dunes. There



ALT-MARSHES IN THE ISLAND OF RÉ, ON THE COAST OF CHARENTES (ATLANTIC OCEAN).

Seas and Coasts of France.

are no bays or natural harbours. All the existant harbours have been created by man. Yet they are numerous, because the North Sea is a rich fishing ground. The two main commercial harbours are *Dunkerque* (Dunkirk) and *Calais*.

The Channel coast. — Two different regions skirt the **Channel Coast** : the Basin of Paris and the Armorican uplands.

The **shores of the Paris basin** are of two types : one, the termination of the chalks or limestone downs, — the other that of



THE CLIFFS OF THE PYRENEAN SEABOARD, NEAR SAINT-JEAN-DE-LUZ, ON THE ATLANTIC OCEAN.

These are schisteous cliffs, while those of Etretat are chalk cliffs.

low, clayish or sandy plains. In the first instance, the shore is a high, straight cliff, — in the second, the shore is a wide sandy beach. Such are the alternated cliffs and beaches of *Picardy* and *Normandy*. Neither the one nor the other type can afford deep and sheltered harbours. But numerous watercourses ending on this coast form very good natural harbours. Nearly all the big ones stand at the mouth of a river, or even farther back on the river course. Such are *Le Havre*, on the estuary of the Seine, *Rouen*, on the Seine, and *Caen*, on the Orne.

The **Massif Armoricain** being composed of hard rocks (granite and sandstone), the coast is rugged and deeply indented. Promon

Soil and Population.

tories, small peninsulas, protecting half closed bays, afford good shelter and deep water.

The most conspicuous features of this coast are the peninsula of *Cotentin* and the peninsula of *Trécorrois*, the *baie du Mont Saint-Michel*, with the famous abbey on its picturesque island, the *baie de Saint-Brieuc* and the Channel Islands: *Jersey* and *Guernesey*.



THE MEDITERRANEAN SEABOARD. CETTE.

The coast of Languedoc, on the Mediterranean Sea, is characterised by a number of lagoons, which are nearly completely cut off from the sea by strands of sand. Cette is built on one of these strands, near the lagoon of Thau.

Each bay shelters a fishing harbour. The main ones are *Granville* and *Saint-Malo*.

At the farthest end of Cotentin stands the naval base of *Cherbourg*, commanding the Channel opening.

The Atlantic coast. — The coast of the Atlantic Ocean belongs to three different types of regions: the *Massif Armoricaïn*, the plain of the *Bassin Aquitain* and the *Pyrénées* range.

The coast of the *Massif Armoricaïn* is very broken and similar to the Channel Armorican coast.

The extremity of the peninsula of Bretagne, which ends in three pointed capes, is called *Finistère* (the same name as "Land's End" in Cornwall). Southward, the indented coast is skirted by

islands : *Groix*, *Belle-Ile*, *Noirmoutier*, *Yeu*. The river *Loire* ends there in a wide estuary. In this region, each bay holds a small fishing harbour. There are two great naval bases : *Brest* and *Lorient*, and two large commercial harbours : *Nantes* and *Saint-Nazaire* at the mouth of the *Loire*.

The coast of the **Bassin Aquitain** is less broken. North-



THE "CALANQUE" OF SORMIOU, IN PROVENCE, ON THE MEDITERRANEAN SEA.

They call "calanque" the numerous bays which penetrate far inland and communicate with the sea by narrow inlets. High rocks surround them.

ward, the coast of *Charentes* has a few cliffs and the islands of *Ré* and of *Oléron* are parts of these cliffs isolated by the sea. But southward of the estuary of the *Garonne* (which is called at this place the *Gironde*), the coast of the *Landes* follows a perfectly straight line, and is skirted by dunes. Not a single natural harbour can be found along this coast, which is 250 km. (160 m.) long, except in the inlet or *bassin* of *Arcachon*.

On the coast of *Charentes* are a few harbours, the main one being *La Rochelle*; the coast of the *Landes* has none. But at the mouth of the *Garonne* stands the important commercial harbour of *Bordeaux*.

On the coast which skirts the **Pyrénées** are numerous bays, surrounded by rugged rocks, and numerous fishing harbours.

Soil and Population.

A commercial one is established at the mouth of the river Adour it is called *Bayonne*.

The Mediterranean coast. — It may be divided into three distinct sections skirting : 1. the *Pyrenean Range*; 2. the *Bassin Rhodanien* and the *Alpine Range*.

The **Pyrenean coast** is very like its namesake on the Atlantic side : many small fishing harbours and one commercial harbour, *Port-Vendres*.

The **coast of the Bassin Rhodanien** is the shore of a low and sandy plain : the plain of *Bas-Languedoc* (Low Languedoc). It is a straight flat coast, offering no natural shelter and skirted by numerous lagoons. But a large commercial harbour has been built there : *Cette*. This coast ends at the *delta du Rhône* which is a low, marshy and sandy stretch of land between the two branches of the lower Rhône.

The **coast which skirts the Alps** is very rugged and picturesque. It is the well-known *Côte d'Azur*, so called because of the extraordinarily intense blue colour of the sea. The islands of *Hyères* face it. Deep bays, encircled by mountains, bear the names of gulfs of *Saint-Tropez*, of *Jouan*, and the road of *Villefranche*. On this coast stands our largest commercial harbour : *Marseille*, and our most important naval base : *Toulon*.

IV

CLIMATE AND FLORA

Climate. — The climate of France is temperate. The summers are not very hot, nor are the winters very cold. The rainfall is not extremely abundant. The average rainfall for a year is from 60 cm. (24 inches) to 1 m. (40 inches).

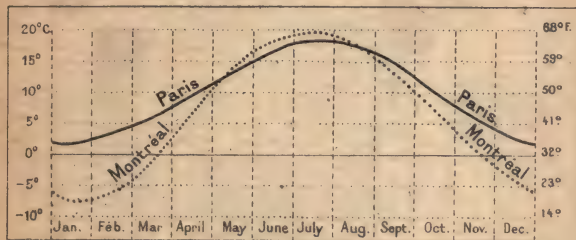
The main cause of these circumstances is that France is situated in the temperate zone of the globe. But the climate of France is even more temperate than that of other regions lying under the same latitude. For instance, Paris is nearly under the same latitude as Montréal, the great Canadian town. But in Paris the mean temperature for the warmest month (July) is 16° C. (60·8 F.); in Montreal it is 19° C. (66·2 F.). The mean temperature for the coldest month (January) is + 3° C. (+ 37·4 F.); in Paris and — 7° C. (19·4 F.) in Montréal. So there are 13° C. (23·4 F.) between the highest and the lowest monthly temperatures in Paris, while there are 26° C. (46·8 F.), nearly twice as much, in Montreal. The Saint Lawrence is frozen during 140 days in the year. The Seine is almost never frozen, neither is the Thames.

This wonderful mildness of climate is due to the currents and

winds which come from the Atlantic Ocean towards the European seaboard.

1. The **Gulf Stream**, which comes from the warm waters of the Gulf of Mexico and crosses the Atlantic Ocean from S.-W. to N.-E., skirts the coasts of France as well as those of the British Isles. So it softens the temperature of these coasts during the winter. On the contrary, the Atlantic coast of North America is skirted by a cold current coming from the Pole.

2. The **sea-winds** blowing during the summer towards the French as well as the British coast, freshen the air during this



MEAN MONTHLY TEMPERATURE IN PARIS AND MONTREAL COMPARED.

The left-hand figures mean centigrad degrees; the right-hand figures mean Fahrenheit degrees.

season. In North America, on the contrary, the wind blows from the land toward the sea during the summer; so it is a dry and hot wind.

This is why the French climate is very like that of the British Isles and very unlike that of North America. But it is not so wet as that of the British Isles, which are surrounded by the sea, while France has only one half of her frontiers bordered by the sea.

Variations of the French climate — Of course there are some differences of climate between the different French provinces.

1. The mildness of the French climate being due to the influence of the sea, it stands to reason that the coast provinces are more favoured in this respect than the inland ones.

For instance, Brittany, Normandy, Picardy, on the Channel coast, have very mild winters, frequent but not heavy rains, a generally clouded sky, and mists which are very like those of Cornwall. On the contrary, Champagne, Lorraine, and Burgundy, which are quite inland, have comparatively severe

Soil and Population.

winters with a good deal of snow, and very hot summers, like those of the United States.

The first of these climates is generally called an **oceanic climate** while the second is called a **continental climate**.

2. In the high mountains or uplands, the winter is of course much colder than in the plains; snow is very abundant in the



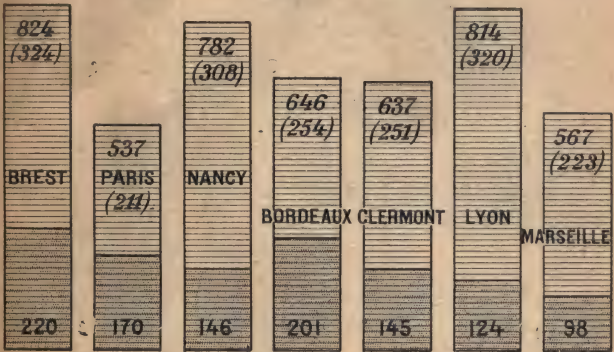
RAINFALL-MAP OF FRANCE.

The mean quantity of 50-75 cm. of rain for the year corresponds to a quantity of about 20 to 30 inches; 75-100 cm. = 30-40 inches; over 100 cm. — over 40 inches.

Massif Central, the Pyrenees, the Alps, Jura and Vosges. On most of these mountains, it melts completely during the summer; but in the northern part of the Alps and the western part of the Pyrenees, which lie above 2,600 m. (8,500 ft.), the snow is permanent.

3. The south of France has a softer climate than the north. The winter is milder and the summer warmer.

4. There is a last variation, more important than the preceding ones: a great difference of climate can be perceived between the provinces with a Mediterranean seaboard and those which receive the Atlantic winds. All the French territory up to the Rhine, the Jura, the Rhône valley, the Cévennes, and the eastern Pyrenees may be considered to be under the Atlantic



ANNUAL QUANTITY OF RAINFALL AND NUMBER OF RAINY DAYS IN THE YEAR, IN SOME FRENCH TOWNS.

The lower part of the diagram and the lower figures show the number of rainy days in the year, while the upper part and the upper figures show the annual quantity of rainfall; the first figures state this quantity in millimeters, and the second figures (between brackets) in tenths of an inch.

influence. The difference is so vivid that it is a habit to talk of the **Mediterranean climate** as opposed to the **Oceanic climate**.

The Oceanic climate is somewhat colder; rain is more abundant; it falls in all seasons, but with a marked increase during the cold season; the chief winds blow from the Atlantic Ocean nearly all the year round. This climate has already been compared to that of the British Isles.

The Mediterranean climate is characterized by very mild winters and very hot summers. While in the Atlantic climate the fall of the leaves and the time of sleep for the trees occur during the winter, in the Mediterranean climate, many trees and plants undergo these processes during the summer. Practically only rains fall between autumn and spring; the summer is nearly always dry. Then, during the winter, a very violent, dry and

Soil and Population.

cold wind blows at intervals from the inland and the mountains toward the Mediterranean Sea : this is the well-known French *mistral*. This last peculiarity excepted, the Mediterranean climate may be compared to that of California



MAP SHOWING THE MAIN CULTURES OF FRANCE.

The vegetation in France. — Except on the very high mountains, where, above 2,800 m. (9,200 ft.) the snow and cold kill all the plants, the climate of France is everywhere temperate and damp enough to maintain an abundant vegetation and allow very varied cultures. In France there are no *bad lands*.

The **Northwestern lands** (Britanny, Normandy, Picardy, Flandre), which are under the wet Atlantic influence, are mainly

woodlands and pasture-lands. They are very like districts of N. W. England, the Saint Lawrence and Massachusetts. Corn can be cultivated, but the main crops are those of *flax*, *apples* and *hops*. The peasants drink mostly *cider* and ale. The climate is too wet and misty to grow the vine there, grapes requiring much sun to mature.

The **other parts of France which are under the Atlantic influence**, but are not so wet, are divided between forests, heaths, meadows, or arable lands, according to the different soils.

The most common trees (classified from the mildest to the coldest climate and from the lowest to the highest level) are the *poplar* (mainly in clayish and wet soils), the *pine-tree* (mainly on sand or sandstone), the *chestnut* (on silicious soil, granite or sandstone), the *nut-tree*, the *oak*, the *beechn*, and the *fir-tree*. The main cultures are those of *maize* (it ripens only in regions both wet and warm), *wheat*, *barley* and *oats* (in the richest loams or limestone soils), *rye* and *buckwheat* (in silicious soils). Other important cultures are those of *sugar-beet*, *hemp* and *flax*; and the *vine*, which can be cultivated in well-sunned limestone or gravel soils.

The **lands with a Mediterranean climate** have few pastures and few thick forests, because of the very dry summer; but mainly evergreen bushes, called *maquis* in Corsica. The trees most often met with are the *plane-tree*, the *holm-oak*, the *cork-tree* and the *eucalyptus*. The meadows are generally very poor and more proper to the raising of sheep and goats than of cattle. *Corn*, *barley* and *maize* are cultivated, but the main cultures are those of the *vine*, the *olive-tree*, the *mulberry-tree* (for the raisin of the silk-worm), the *orange* and *lemon-trees*.

V

THE RIVERS OF FRANCE

Still water. — The French soil is well drained, and there are very few lakes or marshes. There is only one large lake: the *lac de Genève* (called by the Swiss *lac Léman*), on the border of France and Switzerland.

Marshes are found in three regions: the *Dombes*, which is between the Jura and the river Saône; the *Sologne*, which on its north side is encircled by the bend of the Loire; and the *Landes*, on the south side of the Gironde. In these three regions many marshes have already been drained and the land gained in that way transformed into arable land or woodland.

Rivers. — The main part of our rainfall is drained by rivers towards the sea.

Soil and Population.

Our Rivers are not very long, because our territory is not very broad, and because the Massif Central, standing in the middle, distributes the rainfall into all the surrounding valleys. The longest of our four great rivers is not more than 1,000 km. (625 m.) long — the shortest: 720 km. (450 m.) long. These measurements are not very different from those of the Thames (272 km., 170 m.), but very short from reaching those of the Mississippi (7,600 km., 4,750 m.).

Our rivers are not very mighty: first, because they are short, and consequently their draining area is not very large, then because on the whole, France has only a moderate rainfall.



WATERWAYS OF FRANCE.

The smallest of our four big rivers does not measure more than 300 cubic metres (390 cubic yards) to the second, and the mightiest 2,200 c. m (2,860 c. y.). The Thames measures only 197 c. m. (256 c. y.); but the Mississippi measures from 8,500 to 39,500 c. m. to the second (11,050-51,350 c. y.) according to the time of the year.

Our four large rivers are: the *Seine*, the *Loire*, the *Garonne*, and the *Rhône*.

The Seine. — The headwater of the Seine lies in the *Côte d'Or* (gold crest), at the altitude of 476 m. (1,561 ft.). It crosses the Bassin Parisien and reaches the Channel through an estuary. Its main tributaries are: on the right side, the *Marne* and the *Oise*, — on the left, the *Yonne* and the *Loing*.

The Seine is 776 km. (485 m.) long. It measures not more than 300 c. m. (390 c. y.) to the second. It is a regularly flowing river. It has a gentle slope, so the rainwater is drained slowly; and as it crosses countries where the soil is mainly permeable, part of the rainwater does not go immediately to the river; but it penetrates underground and comes to the light again in the shape of regular sources. Great floods are rare. Its tributaries follow the same regular course, save the Yonne. This latter comes from the Morvan, which is an upland of impermeable soil; when the snow melts on this upland, there is a strong spring flood. This

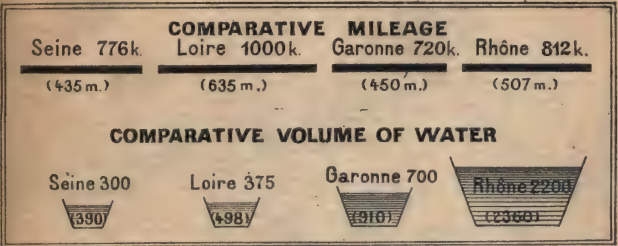
The rivers of France.

may also happen after a heavy rain period. So the Seine's regular course is sometimes interfered with.

The Seine is easily navigable on nearly all its course.

On the Seine stand *Troyes*, *Paris* (our capital) and the harbours of *Rouen* and *Le Havre*.

The Loire. — The headwater of the Loire is in the *Massif Central*, at an altitude of 1,375 m. (4,510 ft.). It crosses the *Massif*



MILEAGE AND VOLUME OF WATER OF THE FOUR LARGEST WATERWAYS.

Central, the Bassin Parisien, the Massif Armoricaïn, and reaches the *Atlantic Ocean* through an estuary. Its main tributaries are, on the right: the *Maine*, proceeding from the *Sarthe*; on the left: the *Allier*, the *Cher* and the *Vienne*.

The Loire is 1,000 km. (625 m.) long. Its volume of water is of about 375 c. m. (488 c. y.) to the second. But it is a very irregular river. The *Massif Central* from which it proceeds (as



THE SEINE IN PARIS.

This is a back view of Notre-Dame in the Ile de la Cité, taken from upstream.

Soil and Population.

well as all its tributaries) has a great slope and an impermeable soil. So when the snow melts in the spring, and when there are heavy rains in Autumn, enormous masses of water suddenly drain into the river, not a drop being absorbed by the soil; at these times terrible floods fill the whole Loire valley; the river sometimes



THE LOIRE IN TOURS.

The Loire is the widest and the longest of our streams, but her volume of water is very irregular. In summer, it goes nearly dry, and enormous sandbanks appear in its bed. After the rainfalls or the melting of the snow, it generally floods its valley.

rises six or seven metres (20-23 ft.) above its ordinary level. On the contrary, in times of drought, the Loire goes nearly dry, the impermeable soil of the region around its sources having kept back no water; sandbanks appear in the wide river-bed. It follows that it is not a navigable stream.

On the Loire stand *Orléans*, *Tours* and the harbours of *Nantes* and *Saint-Nazaire*.

The Garonne. — The Garonne has its headwater in Spain, in the *Pyrenees* at an altitude of 1.872 m. (6.140 ft.). It crosses the *Bassin Aquitain* and reaches the *Atlantic Ocean* by a vast

The rivers of France.

estuary called the *Gironde*. Its main tributaries are all on its right-side: the *Tarn*, the *Lot* and the *Dordogne*.

The Garonne is 720 km. (450 m.) long. Its volume of water is moderate: 700 c. m. (910 c. y.) to the second. But it is an irregular stream. At the time of the melting of the snow (spring) there is



THE GARONNE IN BORDEAUX.

Though Bordeaux is 80 km. (50 m.) distant from the sea, the tide is felt in the Garonne. At this place it is about 500 yards wide and from 5 to 6 m. (16-20 ft.) deep. Very large ships can reach the docks of Bordeaux, which is the fourth harbour of France.

a strong flood, because the headwater is in the lofty Pyrenean region and, for the tributaries, in one of the highest parts of the Massif Central. On the contrary, in summer it has little water, for the same reason as the Loire; but still it is never as dry as the Loire, because, during all the summer, the glaciers melting in the Pyrenees provide it with water without interruption. The Garonne is not a navigable stream.

On the Garonne stand *Toulouse* and the harbour of *Bordeaux*.

The Rhône. — The headwater of the Rhône is in Switzerland, in the *Alps*, at an altitude of 1,753 m. (5,750 ft.). It reaches the

Soil and Population.

French territory after crossing the *lac de Genève*. It crosses the Jura, then the Bassin Rhodanien, and reaches the Mediterranean Sea through a delta, which, like the Mississippi delta, gains some land upon the sea every year. Its main tributaries are; on the right, the *Saône* : which has already received water from the *Doubs*; on the left : the *Isère* and the *Durance*.

The Rhône is 812 km. (507 m.) long. It carries a great volume



THE RHÔNE IN FLOOD, IN THE NEIGHBOURHOOD OF AVIGNON.

The Rhône is our mightiest river. After the rainfalls it is a devastating torrent, flooding each bank over miles. Avignon, which you see in the distance, is built on a high terrace, so that the flood cannot reach the town.

of water : 2.200 c. m. (2.860 c. y.) to the second. But it is irregular : there are strong spring floods at the melting of the snow ; at that time, it can reach a volume of 10.000 cm. (13.000 c. y.), but it is never under 550 cm. (715 c. y.). In spite of this great volume of water in all seasons, the Rhône is hardly navigable; its current is too violent to be easily surmounted. But its main tributary, the *Saône*, is navigable.

It would be a great thing for France if the Rhône were canalised. Through the *Saône* and the *Seine*, which are already joined by a canal, it would make a great waterway uniting the Channel to the Mediterranean Sea, and passing through Paris.

On the Rhône stands *Lyon*.

Other Rivers. — Since Alsace has been given back to France, the **Rhin** (Rhine) waters part of our territory; one of its great tributaries, the *Moselle*, comes from France and crosses Lorraine. Two other big rivers which go to the North Sea are also born on French territory: the **Meuse**, crossing Lorraine before reaching Belgium and the Netherlands, and the **Escaut** (Scheldt), which crosses Flanders before reaching Belgium.

Among the smaller French rivers may be mentioned: the *Somme* draining into the Channel; the *Vilaine*, the *Charente*, the *Adour*, into the Atlantic Ocean; the *Aude*, into the Mediterranean Sea.

VI

THE FRENCH NATION

Origins. — France being at the western extremity of Europe, most of the migrating tribes coming from the East, either by land or by sea, have reached our territory and its shores. Because its climate was mild and its soil fertile, many of these tribes stopped there and settled down. Other tribes, coming later on, have pushed back the first settlers towards the less accessible and less fertile parts and have occupied the already tilled lands. That is the reason why France was peopled very anciently (it was already peopled at the stone age), and why its population is a mixture of many different races.

The different races (classified from the first to the latest settlers) which are still present in our land, in great or small number and more or less unalloyed, are.

1. The **Iberians**: their descendants are the *Basque* people, who have a language and habits of their own, and live in the western Pyrenees on both sides of the frontier, one part being now Spaniards and the other French.

2. The **Ligurs**: their descendants, more or less mingled with Latin people, are now the *Provençaux*, who live in the southern Alps.

3. The **Celts**: their descendants are much more numerous than those of the former races. They can be divided into two types.

The first one is of small stature, dark, with a round head. This type has been slowly pushed back by the second towards the mountainous and back parts of the land; it can now be identified in the Massif Central and in Brittany. They are very like the Welsh people and of the same blood.

The second type is tall, with a clear skin, and, in the IIIrd cent. A. D., they settled in nearly all the plains of our land: these are the *Gaulois*. France at that time was called Gaul, and under this name went all the land from the Pyrenees to the Rhine. The Gaulois have some blood-ties with the Irish.

4. The **Phenicians** and Greeks used to trade all round the

Soil and Population.

Mediterranean Sea; they established their trading stations on our coasts, and some of their descendants settled there for good. Such is the origin of our great harbour of Marseille, for instance, which was a colony of the Greek town of Phocœa:

5. The **Romans**, having conquered Gaul with Julius Cæsar (1st cent. A. D.) made it one of their colonies. Many Latin people came and settled there in the fertile parts and mixed by marriage with the Gaulois; after a time, the bulk of the population went under the name of *Gallo-Romains*, and from this stock comes the majority of the French people, the French language, and the French civilisation.

6. The **Germans**. Invading tribes came from the North during the IIIrd cent. A. D. and IVth cent. A. D., crossed the French territory, and some of them settled there; the *Visigoths* in the Bassin Aquitain; the *Burgunds* in the Saône valley, — they have given their name to the province of Bourgogne (Burgundy); — lastly, the *Franks* in the Bassin Parisien. The Franks were not very numerous and, like the other German tribes, had only a secondary influence on the composition of the population of France. But their name has been given to our country, because their kings reigned over all the north of France and, much later, some descendants of their dynasty extended their power up to the Pyrenees, the Rhine and the Alps.

7. Since the coming of the Franks, France has never been invaded except by the **Arabs** who came from Africa through Spain and have left but few descendants in the south of France (VIIIth century), and by the **Normans**, who came from Scandinavia through the Channel and settled in Normandy.

So it can be seen that the races which have peopled France were numerous, — but many have peopled only a small province. The only ones which have representatives now in the whole of the land are the *Celts* and *Latins*.

Unity of the French nation. — Like the United Kingdom, like the United States, France was peopled at the origin by numerous and different types. But a national unity does not mean a unity of type.

Like the Britons or the Americans, the French people have acquired a real and living unity through a long common historical, political and economical life.

A common historical life is built on the memory of heroes worshipped in common, on hardships endured in common; this is how a national tradition is founded.

A common political life has been created in France by the kings, who, from the XIVth century till the French Revolution, have slowly established a *strong central power*: by them the French people have been taught to obey the same laws and to acknowledge the representatives of a central authority. It has been

made to feel that it forms one body. Then the *democracy*, established by the French Revolution since 1789, called all the citizens to some participation in the government of the nation, and gave to its members a clear comprehension of the solidarity which binds them together.

A **common economical life** means constant trade between uplands and lowlands, between woodlands and croplands, between pasture lands and corn-growing lands, between agricultural regions and manufacturing regions, between coastland and inland. All this has enabled the French people to know one another and to acquire common ideas and common habits, as well as the consciousness of common interests.

So has been created the *Frenchman*, whose physical features can hardly be defined; but the civilization of the people is clearly marked out and can easily be distinguished from the other Latin civilizations (Italian and Spanish).

The unity of language is the tangible sign of the unity of the nation. The same French language is spoken in the whole of France; but in certain provinces an old local language has sometimes survived alongside the French language. Such are: the *Alsatian*, the *Flemish*, the *Breton*, the *Basque* and the *Provençal*.

VII

THE FRENCH POPULATION

Density of the French population. — The census of 1911 gives us the figure of 39,601,000 inhabitants (41,480,000 with Alsace-Lorraine). It has already been said that this number is slightly inferior to that of the population of the United Kingdom, and it is in a proportion of 2 to 5 to the population of the United States.

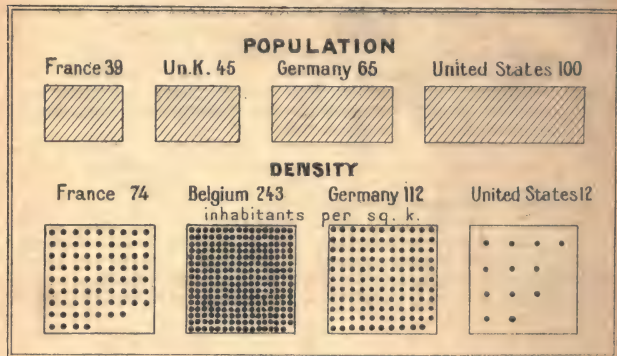
The mean density of the population is 74 inhabitants per square kilometre (191 per sq. m.). This density is half that of the United Kingdom: 143 inh. per sq. km. (370 per sq. m.). But it is of course superior to that of the States, whose immense territory only began to be peopled a century ago and has but 13 inh. per sq. km. (34 per sq. m.).

Growth of population. — Between the years 1901 and 1911, the French population has increased by 640,000 inhabitants, about 64,000 each year. This growth is very small. Births have never exceeded deaths by more than 84,000 per annum between 1901 and 1911, and during these ten years, there have been two during which the deaths have exceeded the births. Yet, during those same years, the births in the United Kingdom have exceeded the deaths by 480,000 annually and in Germany by 850,000.

Soil and Population.

A low birth-rate is the great public evil in France.

The French population has increased a little because immigration exceeds migration. Few French people emigrate, though France possesses a large colonial Empire and the French people



POPULATION OF FRANCE.

are well received in other countries. On the contrary, France receives many immigrants. In 1911 there were 1,046,000 **strangers** settled in France: 377,000 *Italians*, 310,000 *Belgians*, 87,000 *Germans*, 80,000 *Spaniards*, 68,000 *Swiss*, 35,000 *English*.

PART II

THE NATURAL DIVISIONS OF FRANCE

I

THE RÉGION DE L'EST (EASTERN REGION)

General features of the Eastern Region. — The Eastern Region stretches from the *Rhine* to the *Marne*, and from the *Ardenne* to the *Seuil de Bourgogne*. Inside these limits, the lands differ, but they all have two common features :

1. **A common physical feature :** their climate, which is rather cold and continental, with hard snowy winters and hot summers, with frequent thunderstorms.

2. **A common historical character :** they form the borderland between France and Germany, and, what is more, between two civilizations : the French and the German. Both languages are spoken there, though each has its own domain, the limits of which have fluctuated during the ages. But the Eastern Region is quite French by its past history and by its aspirations. It is the *marche* (frontierland) where the western civilisation has fought and resisted the Germanic invasions.

Its different elements are : the *Vosges*, separating *Alsace* from *Lorraine*, and the *Ardenne*, its northern limit.

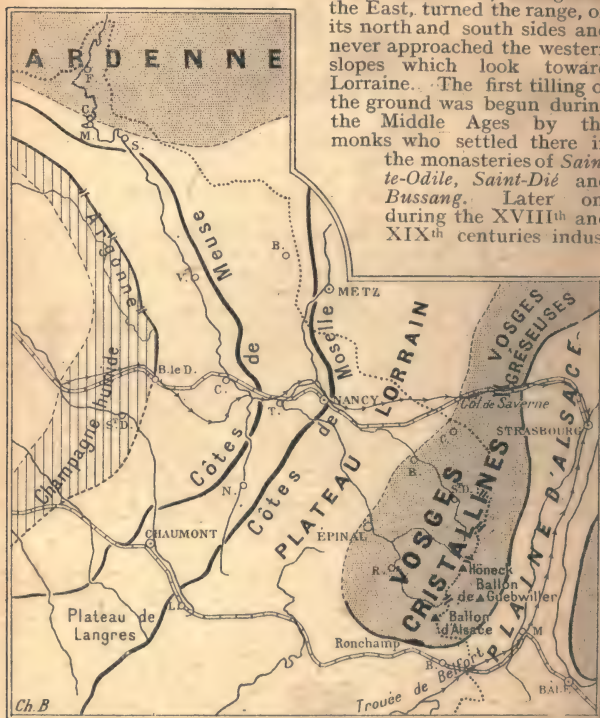
The Vosges ranges. — The Vosges ranges are of moderate height, and shaped in *ballons* (balloons) and *chaumes*. They have never been favourable for human settlements or for the building of roads. The passes are high and not easy to reach. The valleys, (upper valleys of the *Moselle* and the *Meurthe*), which have been broadened by ancient glaciers long ago vanished, are the only good settling places, because of their gentle slopes and of their broad and flat bottom. There stand the farms among meadows. The mountainous parts are covered with beeches, oaks and especially fir-trees, and above these forests are high pasturelands where the cattle are sent during the summer.

The climate is cold, somewhat wetter on the Lorraine side which receives the Ocean winds, and more dry on the Alsacian side which looks inland.

The Vosges have long remained uninhabited, because of their

The natural divisions of France.

forbidding character. The first inhabitants were *Celts*, not numerous, living on their cattle. The German invasions (IIIrd and Vth centuries,) coming from the East, turned the range, on its north and south sides and never approached the western slopes which look toward Lorraine. The first tilling of the ground was begun during the Middle Ages by the monks who settled there in the monasteries of *Sainte-Odile*, *Saint-Dié* and *Bussang*. Later on, during the XVIIIth and XIXth centuries indus-



THE EASTERN REGION.
Vosges, Alsace, Lorraine, Ardennes.

trial establishments appeared in the mountain valleys and attracted a new population.

Nowadays the main part of the inhabitants lives from indus-

The région de l'Est. (Eastern region).

trial work. The smaller part lives on cattle raising and cheese-making. The industries are :

1. The **wood-cutting** (the oldest) born is the forest.
2. **Glass making** was born in the land because of the silicious elements which can be extracted from the Vosges sandstone. Its crystal and fine glass industry are still renowned. The main factories are in *Baccarat* and *Cirey*.
3. The **weaving of flax and cotton** which once prospered in Alsace, round Mulhouse, has been carried on in the Vosges,



Phot. Weick.

THE VALLEY OF LONGEMER AND RETOURNEMER, IN THE VOSGES.

The valleys in the Vosges are generally broad ; the bottom is flat and often occupied by a lake. The best known are the lakes of Gerardmer, Longemer and Retournemer, in the small valleys which go down to the Vologne, tributary of the Moselle.

since 1871, when Alsatian proprietors brought their factories there, wishing to remain French. Now all the Vosges valleys are full of the humming of the looms making cotton hosiery.

4. **Thermal waters** have given birth to prosperous towns on the mountain border : *Contrexeville* and *Vittel*.

By the means of all these industries, the Vosges valleys are now peopled even more densely than the Lorraine tableland and nearly as much as the Alsatian plain. The main towns all stand on the Lorraine side : *Epinal*, *Saint-Dié* and *Remiremont*.

The natural divisions of France.

The plain of Alsace (Elsass). — The plain of Alsace, which was annexed by the Germans in 1871, stretches along the *Vosges ranges*, and the other bank of the Rhine is bordered by its counterpart : the *Black-Forest*. It is composed of thick layers of loam, deposited by the Rhine. This loam is extremely fertile. Alsace, well protected by these two mountain ranges, has very hot summers and winters more temperate than those of the *Vosges uplands*.

It is a land of extraordinarily rich **cultures**. The *wheat*, the *sugar-beet*, the *hop growing* are the most prosperous in this rich soil. The *vine*, cultivated on the lower slopes of the *Vosges* looking eastward, yields the renowned "*vins du Rhin*."

Alsace has many other **industries**. Her *potash-mines* are the richest in the world. Sheep-raising gave birth long ago to *wool-spinning* and *wool-weaving industries*, and now, as in Lancashire, *cotton-spinning* and *cotton-weaving*, introduced in the XVIIIth century, have taken their place. The industrial weaving centre is *Mulhouse*.

Great works have made the *Rhine* navigable from *Bâle*, in Switzerland, to the sea. It is the road which leads from Alsace to the North Sea. Through it she receives her raw cotton and sends back the finished product.

The *canal de la Marne au Rhin* and the *canal du Rhône au Rhin* are roads which, as well as the railways, put her into communication with Lorraine (through the *col de Saverne*) and with Burgundy (through the *trouée de Belfort*). Everything is favourable to the Alsatian trade, except the German government which has for 48 years impeded its relations with France.

Being prosperous, Alsace is densely peopled : 1,874,000 inhabitants, 129 per square kilometre (346 per sq. m.). The people speak French, German and some dialects derived from German. But their habits and education are French, except in the case of the numerous Germans who settled in Alsace after the annexation.

The chief towns are : STRASBOURG (179,000 inhabitants), capital of the country, the industrial town of *Mulhouse*, and *Colmar*, which is the largest agricultural market.

The Lorraine plateau. — The Lorraine plateau is the western prolongation of the last slopes of the *Vosges*. It is composed of sandstone, limestone and clay tablelands, and is limited in the west by a number of *Côtes* or *Hauts*, stretching in a line from N. to S. and having at their feet the *Moselle* and *Meuse*. Those hills have their steep side looking towards the East. They are called, from east to west : *côtes de Moselles*, *côtes* or *Hauts de Meuse*, and *côte du Barrois*. This last line is more broken toward the South, but toward the North becomes a regular range called *Argonne*.

The région de l'Est. (Eastern region).

The climate of Lorraine is nearly as inclement as that of the Vosges.

Lorraine was cut in two by the German annexation of 1871, but it has exactly the same features on both sides of the frontier.

1. **A poor agricultural life.** The land is full of woods; the fields are small, the people few in number; it is even less densely populated than the Vosges valleys. The Côtes are the only rich parts, because on their sunny side ripen the grape yielding



Phot. Marchal.

THE HAUTS-DE-MEUSE, AT HATTONCHATEL.

Hattonchâtel stands on the crest of the " Hauts-de-Meuse," not far from Saint-Mihiel. Towards the East, it overlooks a clay plain, belonging to the Lorraine plateau and called the Woëvre.

a wine which used to be as celebrated as that of Alsace (*vins de la Moselle*).

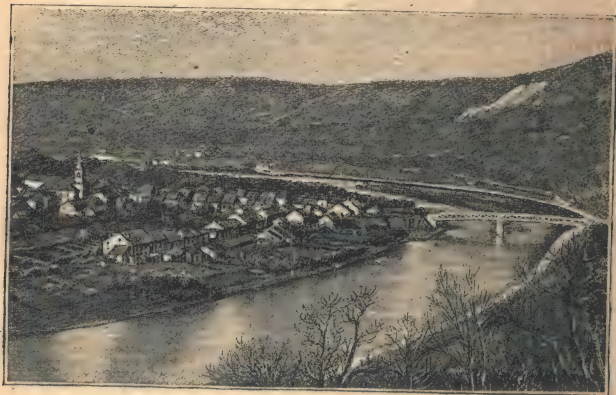
2. **A rich industrial life.** In Lorraine are the richest deposits of iron ore of the world. The ore production of the part of Lorraine which has always remained French, added to the production of the annexed part, gives a total of 38,300,000 metric tons for the year 1913 (French Lorraine: 17,300,000; annexed Lorraine: 21,000,000), while the whole of France produced only 19,400,000 m. t., and the whole of Germany 28,000,000. Besides, in the annexed part, there is a rich coal field on the river Sarre.

The iron industry is extremely prosperous. The main centres are: in French Lorraine, the basin of Nancy and of Lunéville,

The natural divisions of France.

the basin of *Briey* and the basin of *Longwy*; in the annexed part, the basin of *Thionville*. If, at the beginning of the war, the Germans had not occupied our iron mines of *Briey* and *Longwy* they would have been unable to sustain the war so long, being shut off from the rest of the world by the blockade.

3. **A military organisation.** The treaty of *Frankfurt* having deprived France of the *Vosges* ridges, she has been obliged to prepare a defensive war at the back of the *Vosges*, on the



THE MEUSE AT JOIGNY, IN THE ARDENNE.

The Meuse has cut her valley into the plateau which now overlooks her. Notice the meander, which surrounds a loam plain, on which has been built the village.

Lorraine "*côtes*," at the points where the great roads coming from the east cross them. This is the meaning of the important fortified places of *Verdun* and *Toul*. At the same time, the Germans have made on the other side of the frontier a fortified place of the town of *Metz*.

On the whole, Lorraine has now great military and industrial importance, and very small agricultural importance. The rural population is disappearing, while the urban population grows. The aboriginal element of the population speaks French. The greatest town is *NANCY* (119,000 inh.), capital of Lorraine, the old residence of the dukes of Lorraine, rich in monuments of the past. But it is surrounded by a belt of industrial suburbs (iron-works, breweries). Next come *Briey* and *Lunéville*, *Longwy*,

The région du Nord. (Northern region).

Toul and Verdun, Commercy and Neufchâteau, Bar-le-Duc and Chaumont. All these towns have remained French. In the annexed part were *Sarrebruck, Metz and Thionville*, now restored to France.

The Ardennes. — Only the south-western part of Ardennes belongs to France (400 m., 1,300 ft., mean altitude). It is a vast tableland the surface of which has been levelled by erosion, and deeply cut through by meandering river valleys. The most important of these valleys is the *Meuse* valley.

The tableland, composed mainly of schist and sandstones, is impermeable and unfertile. Only forests grow there, broken by marshy and peaty meadows, called *fagnes*, where only sheep can be raised.

The climate is inclement and the land nearly uninhabited. On the contrary, the valleys are well sheltered and warm; the meandering rivers surround and water rich meadows. Towns have grown there. One of them, *Sedan*, has long been prosperous on account of its cloth stuffs, made with the wool of the sheep raised on the tableland. Nowadays the most prosperous towns are those where iron-works have settled, stimulated by the neighbourhood of the iron-works of Lorraine. These towns are MÉZIÈRES-CHARLEVILLE, *Revin, Fumay*.

II

THE RÉGION DU NORD (NORTHERN REGION)

The Northern Plain. — This is a natural region cut in two by a conventional frontier line separating France from Belgium. But both sides of the frontier have the same climate, the same soil, the same kind of rivers, the same agricultural and mining resources.

The country is a low plain, rising and undulating towards the inland, but so low on the seaboard as to be sometimes below the sealevel.

These differences in altitude, joined to a difference of soil, allow us to distinguish, from S.-E. to N.-W., the **plaine du Hainaut** from the **plaine de Flandre**. The first is characterised by a number of chalky downs, covered by a layer of fertile loam. The other is a lower plain commanded by hills called *Monts* (*Monts Cassel, Mont des Cats, Mont Kemmel*). It is composed of clay and consequently wetter than Hainaut, but the upper soil is also fertile loam. Lastly an extremely low stretch of land, composed of sand and gravel and forming a straight seaboard whose underground layers of sand are always impregnated with salt-water, (it is therefore called an "amphibious land") bears the name of

The natural divisions of France.

Flandre Maritime. This coast offers no natural harbours; it inland is sheltered from the sea by a line of dunes and dyke.

The last feature of this land is a long coal field: the **bassin franco-belge** (franco-belgian basin), which crosses Flandre and Hainaut, S.-W. to N.-E., from the French town of Béthune to the Belgian town of Liège.

This land has a purely **oceanic climate**; mild winters, fresh summers, a misty atmosphere, frequent rainfalls, especially during the winter. No grapes can mature in such a land. It is



THE NORTHERN REGION.

generally moist climate, and rendered more so by the neighbourhood of the sea.

The **rivers** are the *Escaut* (Scheldt), which receives the *Lys* and the *Scarpe*; the *Sambre*, which falls into the *Meuse*. They come from the southern hills and tablelands (Artois and Picardy), and their lower course is in Belgian territory. They are regular full rivers, always navigable, easily put into communication with one another by canals.

On the whole, this unpicturesque land is full of natural resources: culture can be very successful on the loams; the meadows on the wet clay are splendid; coal is abundant; the waterways are numerous and always navigable.

The northern population. — The Northern Plain, being a wide open way between the Ardenne highlands and the North Sea shore, has been a passage through which many invasions have reached France, for instance that of the *Franks*. Some have

The région du Nord. (Northern region).

passed and gone. Two invaders have remained and settled here: the *Wallons*, in the south-eastern part called Hainaut; the *Flamands* (Flemish), in the north-western part, to which they have given the name of Flandre. The first now speak French; the others Flemish; but the majority of the latter, especially in the French part of Flandre, also speak French.

The Wallons have put to remarkable use the great resources of their fertile land. But the Flemish have been even more wonderful. They have dessicated the soil of the Flandre Maritime,



Phot. Blanchard.

THE MONT-AIGU, IN FLANDRE.

In the perfectly flat plain of Flandre stand a few hills, not more than 200 m. (600 ft.) high, but they stand out so strikingly and their slopes are so steep that they can well be called *Monts* (Mountains); such are the Mont-Aigu, the Mont des Cats, in the French part of Flandre; the Mont Cassel, the Mont Kemmel, in the Belgian part.

which used to be imbibed with salt water; they have drained it by mean of channels, called *watergands*. Another system of channels, called *wateringues*, brings in the fresh water. By abundant manuring, they have transformed the soil, from sand and gravel to arable ground. They have dessicated the marshes, *moers*, and have transformed them into good pasture-land, or *polders*. At last they have fixed the moving dunes of the coast and built an uninterrupted line of dykes along them. One can truly say of the Flemish soil that it has been reclaimed and made by the *Flamands*.

This land, naturally or artificially fertile, gave birth later on

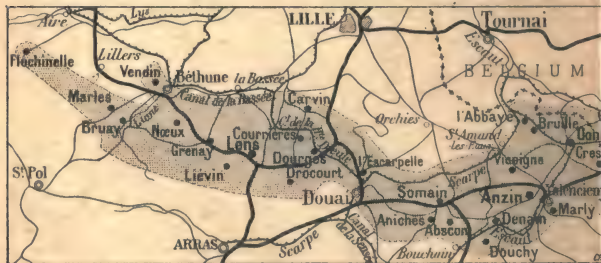
The natural divisions of France.

to industries, created by both Flamands and Wallons. F



WATERWAYS OF THE NORTHERN REGION.

Hainaut, whose industrial and commercial towns used to



THE NORTHERN COAL-FIELD. — Western part of the Franco-Belgian Basin.

the growing flax, well adapted to the wetness of the country, necessitated the erection of spinning and weaving factories. The numerous floods of Flemish shepherds fed the wool spinning and weaving industries. Cotton weaving was introduced and at last, when coal became an industrial fuel, iron-works appeared.

So the Northern Region, which, even in the Middle Ages, was formed of the two rich and populous provinces called *comté de Flandre* and *comté*

The région du Nord. (Northern region).

renowned for their fairs, is a more populous region than ever and thickly dotted with towns.

It boasts 20 towns of more than 15,000 inhabitants and the mean density of population is 250 per square kilometre (650 per sq. m.).

Trade and production. — In *Hainaut*, besides the abundant growing of corn, flax, sugarbeet (especially in the *Cambrésis*,



THE PAS DE CALAIS.

The dotted line between Dover and Sangatte-Calais shows the projected tunnel through the straits.

central market town *Cambrai*), numerous industries have developed: weaving factories, sugar manufactories, iron and steel-works. The main centres are *Maubeuge*, *Avesnes* and *Fourmies*.

In the coal-basin, in the middle of the rich arable land, may be seen a long line, scarcely ever broken, of working cities, crowded round the coalpits and factories: *Béthune*, *Lens*, *Douai*, *Valenciennes*, *Denain*, *Anzin*, *Théry* which touch one another. These are not the principal towns of the region, but they are the most

The natural divisions of France.

densely populated, and they produce 65 per cent of the coal extracted from the whole French territory. Their machines and tool factories are enormous.

In the Plaine de Flandre (Flemish plain) you again find yourself among rich fields, though more broken by meadows, because the ground is damper. The sugar-manufactures are scarcer; but the textile industry is highly developed. Besides *Armentières*, whose speciality is linen-weaving, in the Lys valley you find the enormous working centre (really the heart of the region) made by LILLE (217.000 inh.), ROUBAIX (122.000 inh.) and TOURCOING (82.000 inh.), which, with their suburbs, form one great town of more than 600.000 inhabitants. It is the capital of the industry of wool and cotton as well as of metallurgy, which the coal-basin has promoted.

In Flandre Maritime the people live exclusively by cattle raising and agriculture. The cattle and sheep thrive in the polders by the sea. The population has a lesser density than in the industrial region, but it is still very numerous. The people live on big farms or in middle-sized market towns, such as *Hazebrouck* and *Saint-Omer*.

On the straight and sandy shore there is no place for any natural harbour. But the wealth of the inland has promoted the building of two large commercial harbours: DUNKERQUE (Dunkirk) and CALAIS (72.000 inh.). DUNKERQUE owing to its railways and waterways is particularly well situated with regard to the industrial region, and its harbour is always busy with the importation of raw material: cotton, wool, flax, timber—and the exportation of manufactured goods. Yet the French Northern Region trades even more through *Antwerp* than through Dunkerque.

III

THE CHAMPAGNE

The plain of Champagne and its borders. — A “Champagne” or “campagne” (in English: Champaign, or Champain) means in the peasant language a flat, far-stretching plain of dry surface and permeable soil. So it is generally a chalk or limestone land. We shall see later on that such is the case with the countries called *Campagne de Caen*, in Normandy, *Campagne Berrichonne*, in Berry, *Champagne des Charentes*, in the west of France. Here we study the Champagne proper, which is the flattest and driest of them all.

The plain of Champagne, also called **Champagne Pouilleuse** (*pouilleux* meaning *ragged*) is a wide chalky plain, of permeable and unfertile soil, where the climate is stern and windy and the



THE BASSIN PARISIEN.
Champagne, Picardy, Normandy, Parisian Region, Lands of the Loire.

The natural divisions of France.

drought in summer great. It is covered with moors just good enough for sheep to graze upon.

This plain is cut through from east to west by the valleys of the *Aisne*, *Marne*, *Aube* and *Seine*. These valleys are deep and wide, sheltered from the wind, full of sources which give back the water absorbed by the chalk of the table-land, and the bottom is covered with a thick layer of fertile loam. All the good agricultural elements missing in the plain are found in the valleys.



Phot. Hitier.

THE PLAIN OF CHAMPAGNE.

It is a dry, naked, chalk plain, on which only sheep can graze. Notice in the distance a plantation of pine-trees. They plant them in great number to fertilize the soil.

The borderland of Champagne is formed by a number of widely different countries,

1. Eastward : the **Champagne Humide** (*Humide* meaning *moist* or *wet*) consists of a stretch of impermeable clay. Water is abundant. The land is full of marshes, meadows and woods. It is bordered by the hills of Barrois and by the Argonne, and it surrounds the east side of the white and arid Champagne with a green belt.

2. Westward : the **Falaise de l'Ile-de-France** (*Falaise* meaning *cliff*) cuts Champagne from the Ile-de-France, that is, the inner part of the Bassin Parisien — quite the heart of France in fact. This cliff is composed of limestone; its abrupt slope turned towards the rising sun, looks out over the plain of Champagne. This fact, joined to the nature of the ground (limestone), makes it eminently suited to vine-growing.

3. Southward the **Pays de l'Yonne** borders Champagne. The landscape is more smiling and varied. The calcareous plains of the Auxerrois are good for corn and vine-growing, while the plateau of *Sénonais* and the *Pays d'Othe*, being composed

of clay, are covered by a beautiful forest broken by meadows.

The life of the people. — In the Middle Ages, Champagne was crossed in all directions by good, hard and dry roads, much frequented by the pedlars trading between Flandre and Burgundy, between France and Lorraine and vice-versa. In the towns, each year, were held celebrated fairs, where the merchants



THE FALAISE D'ILE-DE-FRANCE, AT VERTUS.

All along this cliff which looks Eastward and is well exposed to the sun-rays stand the famous vineyards of Champagne. Vertus is, with Reims, Epernay and Ay, one of the most important markets for the sparkling wine.

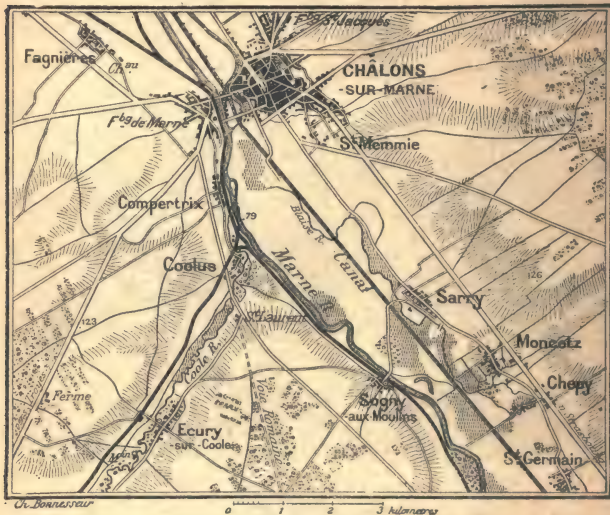
of these rich provinces used to meet. The most renowned was that of *Troyes*, capital of the earls of Champagne.

The railways have now killed the fairs, and Champagne is only a crossing of ways for the trade coming from North or East. But it has kept some elements of its old wealth and has acquired some new ones.

I. In the **Champagne Pouilleuse** the people have left the desolate plain to gather into the valleys, where are the towns : *TROYES* (55.000 inh.) in the Seine valley, — *Arcis-sur-Aube*, in the Aube valley, — *CHALONS-SUR-MARNE* and *Vitry-le-François* in the Marne valley, — *Rethel* and *Vouziers*, in the Aisne valley. In some of these towns, especially in *Rethel* and *Troyes*, cloth-

The natural divisions of France.

weaving is an old standing industry, thanks to the wool of the sheep grazing on the surrounding heaths. But in Troyes, it has now been superseded by cotton-hosiery and Troyes is the most important hosiery centre of France. The plain itself, where



GROUPING OF POPULATION IN CHAMPAGNE.

This map represents a region north of Châlons-sur-Marne. Note the absence of settlements on the dry uplands. The towns, boroughs and isolated farms stand along the valley-lines, at the water-points (rivers and sources).

the sheep-herds have grazed for centuries, is changing. Pine-trees have been planted in increasing number. They keep some moisture in the soil, and gradually cover it with a layer of vegetable mould. After a few years, the pine-trees can be cut down and the fertilized soil can be made to bear some crops.

2. The **Champagne Humide** is a land of woods and meadows. The primeval means of existence of its inhabitants were wood-cutting and cattle-raising. The soil anciently contained some iron-ore, and, at a time when the smelting of the ore was carried on with wood-fires, some metallurgic centres were born.

They have left a survivor in the industrial district which surrounds the blast-furnaces of *Saint-Dizier*.

Small towns have for med at the places where the rivers cross the highest ridge of the hills of Barrois : such are *Bar-sur-Aube*, *Bar-sur-Seine*, etc.

3. The **Falaise de l'Île-de-France** is a vineyard. There, are made the white wines which a special sweetening process transforms into the celebrated "crus" (vintages) of sparkling *vins de Champagne*. The main centres of this industry are REIMS (125,000 inh.), *Epernay*, *Ay* and *Vertus*. Reims was and is still an important centre of cloth-making.

4. In the **Pays de l'Yonne**, you find, on a smaller scale, all the industries and modes of life of Champagne: wine-production in the Auxerrois (*Châblis*); cotton and woollen-hosiery in the Pays d'Othe; cattle-raising in the Sénonais. The principal market towns are *Auxerre* and *Sens*. But these districts are not part of Champagne proper. They belong to the borderland of Bour-gogne (Burgundy). (See p. III).



E. Ciffault, Del.

THE VINEYARDS OF CHAMPAGNE.

The dotted part shows the vineyards.

IV

PICARDIE (PICARDY)

The plain and its borders. — The "plaine picarde" is a chalky tableland, whose subsoil is similar to that of Champagne, but with some widely different features.

First, it is an **undulating country** : a number of broad parallel folds and of deep valleys, oriented from west to east, admit the Channel-winds into the heart of the country as by so many open doors.

Then the chalky subsoil is covered by a layer of **fertile loam**. This layer is thicker in the eastern part of the plain, in the

The natural divisions of France.

Vermandois and the *Santerre*. It is thinner in the west, in the *Ponthieu* and the *Vimeu*. Besides, the underground chalk is mixed with a valuable manure : phosphate.

Lastly, it has quite an **oceanic climate** : mild winters, fresh summers, frequent rainfalls, misty or cloudy sky. The moisture is constant, and the permeable soil allows the water to drain regularly into the rivers, which are always full : such are the *Somme* and the *Thérain*, which falls into the *Oise*. The valleys are marshy, while the tableland which overlooks them is dry.



THE PLATEAU OF PICARDY.

It is as dry as the neighbouring valleys are moist. But a great part is covered by a fertile loam, on which they grow corn and sugar-beet.

The "plaine picarde" is bordered by four small regions of original features.

1. Northward, the **Artois**, characterised by the hills bearing that name. It is a chalk fold, covered with loam, similar to the folds of Picardy proper, but higher. Towards the sea it breaks into a semicircle of chalky cliffs overlooking a wide clayish lowland called the **Boulonnais**, which can be compared to the English *Weald*, on the opposite side of the Channel.

2. Eastward, on the other side of the *Oise* valley, is the **Thiérache**, a moist and clayey plain, covered with woods and marshes ; quite a contrast to the dry Picardy.

3. Southward, the **Bray** is a high and elongated fold of the same kind as the Artois. But the top has disappeared through erosion, so that its chalky interior is brought to view in a number of steep hill-sides overlooking and surrounding an inner clayey layer, closely resembling the plain of Boulonnais.

4. On the seaboard, the high chalky plain of Picardy ends in regular *cliffs*, forming a long, straight wall, broken only by the sandy estuaries of rivers. But at the foot of the cliff is a beach, often miles broad, sometimes sandy, sometimes made of bogs, called the **Marquenterre**. This land is fertile when properly drained and dried,

The life of the people. — The land being rich and fertile, everywhere surrounded by cultivated lands, bordered by an uninviting shore-line, the people of Picardy have always looked inland and never seaward.

On the tableland, in its richest parts the loam and phosphate allow of the cultivation of corn, sugar-beet, flax, hemp. In the poorer, sheep are raised. Cultivation and sheep-raising have extended to the Marquenterre, after it had been drained and fertilized. The Picards call it their *Bas-Champs* (Low-fields).

In the valleys, where the ground is always full of moisture, it has been drained by numerous lines of small channels, which cut it chessboard-wise into a number of small vegetable-gardens. Those gardens are called "*hortillons*" (from *hortus* = garden, in



Phot. Berthaud.

THE "HORTILLONS" OF THE SOMME.

The broad and moist valley of the Somme is one vast vegetable garden, broken by numerous channels, from which the gardeners take out the mud to fatten their gardens. They carry their vegetables to market on long, flat punts.

The natural divisions of France.

Latin). They are a source of wealth to the inhabitants of the Somme valley.

Some **industries** have their source in local cultures. In the Santerre, sugar-manufactures have been built amid the sugar-beet fields. Round Saint-Quentin, the cultivation of hemp and flax has developed linen-weaving. Round Amiens, cloth-making was a primary result of the sheep-raising on the Picard tablelands.



Phot. Bouvry.

THE MANSION-HOUSE OF ARRAS.

The heart of the towns of Flandre and Artois was the market-place (*la place*) where were held the fairs, where they sold the corn. The Mansion House was the embodiment of the thrifty activity of the townsmen, always so jealous of their old city-privileges. The Mansion House of Arras with its belfry was a lovely piece of architecture : the Germans have destroyed it like that of Ypres and many others.

It has been partly superseded by the making of cotton velvet as in many other places where cotton has taken the place of wool.

The main towns are of course in the valley of the Somme : SAINT-QUENTIN (55.000 inh.), Péronne, AMIENS (90.000 inh.), Abbeville ; in secondary valleys are Doullens, Montdidier, and in the Thérain valley BEAUVAIS, at the border of the Ile-de-France. On the coast are some fishing harbours and small bathing-places, but no important haven.

The surrounding regions partake of the agricultural wealth of Picardy. One of the finest and largest herd of milch-cows

which France possesses grazes on the wet clay meadows of the Bray (cheese-making in *Gournay*). Thiérache also is a cattle-raising land; the only recognised industry is basket-weaving, fostered by numerous osier-grounds. The Artois grows mainly corn and sugar-beet, like Picardy; the towns: ARRAS and *Saint-Pol* are agricultural markets. In the meadows of Boulonnais is raised a special breed of strong horses. And in the shelter of the cliffs stands BOULOGNE, the most important fishing harbour on the French coast.

V

NORMANDIE (NORMANDY)

The Norman territory. — The name of Normandie (Normandy) has been applied to a number of regions which were occupied in a definite manner by the **Normands** (Normans) after they invaded that part of Europe in the Vth century. They created there the *duché de Normandie* (duchy of Normandy), which stretched from the Seine to the peninsula of Cotentin. The different parts of this dukedom had only two common geographical features :

1. The equable oceanic climate, mild and wet, like the Picard climate;

2. A population in direct descent from the old invaders : tall, fair men, with clear eyes and a ruddy complexion.

This territory may be divided into three different geographical regions, each oriented in a perpendicular direction to the shore line.

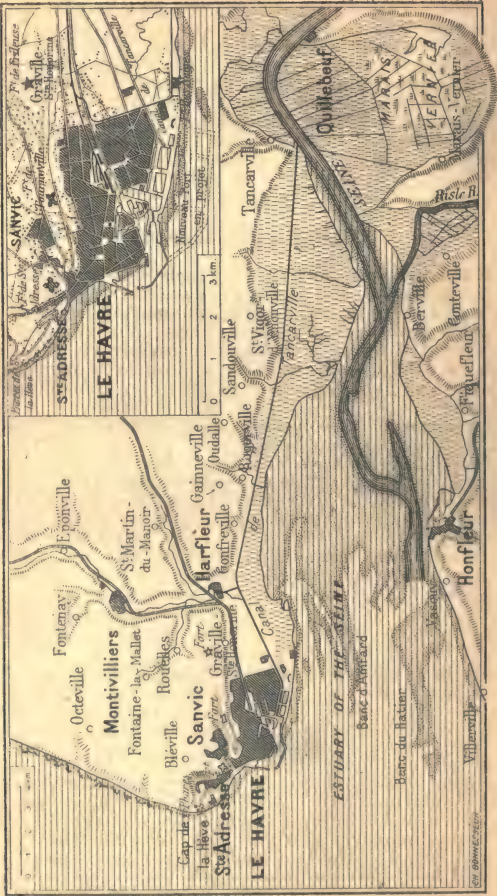
1. **Normandie occidentale (Eastern Normandy)**, N.-E. of the Seine valley, a high chalky tableland, covered with loam, deeply cut through by river valleys, which end either at the channel or in the Seine valley, overlooks the sea from its high cliffs. This large peninsula drawn on the map by Eastern Normandy north of the Seine estuary is called the *Pays de Caux*.

2. **Normandie centrale (Central Normandy)**, lies between the Seine and the peninsula of Cotentin and is of more varied features.

On the east side, round the Seine, it is a low tableland of chalk subdivided by numerous valleys the bottom of which is made of clay. The widest and most fertile is the well-known *vallée d'Auge*. These valleys run to the shore and end there in wide strands. One of them is the well-known strand of *Trouville-Deauville*, a fashionable watering place. Between the strands are chalk cliffs.

Westward, near Cotentin, it is a limestone tableland, a "campagne" : the *Campagne de Caen*. Its soil is fertile, but permeable and dry, and the land ends on a ragged coast, full of rocks, called *les rochers du Calvados* (the reefs of Calvados). In the inland, a fold of the kind of those described in Picardy (Artois

The natural divisions of France.



LE HAVRE AND THE SEINE'S ESTUARY.

Normandie (Normandy).

and Bray) forms the *collines de Normandie* and the *collines du Perche*.

3. **Normandie Occidentale (Western Normandy)** does not belong to the Bassin Parisien. It is already part of the *Massif Armoricain*. The name of Western Normandy covers all the peninsula of Cotentin, as well as the regions which are its southern prolongation. The ground is a table-land of granite and schist, impermeable, not very fertile, covered with moors



A VALLEY IN THE PAYS D'AUGE (NORMANDY).

This is one of the richest lands in France: fat meadows, separated by lines of apple-trees. This is the land which produces the best sparkling-cider and the cheese called Camembert, Livarot, Pont-Lévéque.

and meagre pasture-land, broken by bushes, and small woods; all this forms the kind of landscape described in French as "*Bocage*" (meaning *small woods*). The "*Bocage Normand*" is one of the largest in France. The coast of Cotentin is rather abrupt and indented.

Agricultural Normandy. — In spite of their old reputation of bold sailors, the Normans have always lived on the land more than on the sea. The fields are everywhere productive and the cultures are as varied as the elements of the soil.

In Normandie Orientale, in the Pays de Caux, corn (wheat and barley) is cultivated on the loam. The driest parts are

The natural divisions of France.

pasture-land for the sheep. The people, rich and numerous, live on great farms. There are no towns except in the Seine valley, as will be seen later on.

In Normandie Centrale, large herds of milch cows and cattle



ROUEN AND ITS SUBURBS.

In all the suburban towns are cotton spinning and weaving fabrics.

Normandie (Normandy).

are raised on the rich pasture-land afforded by the clayish valleys of the eastern part. In the Campagne de Caen, which is drier, horses are raised and corn cultivated. In the hills of Normandy can be found all the different kinds of cultivation and breeding. Butter and cheese are the chief exportation of Normandy : the butter of Isigny (in the *Bessin*, in the lower part of Cotentin), the cheeses of Camenbert and Livarot. There are numerous market towns : Alençon, Lisieux, Pont-Lévéque. The main one is CAEN.

In **Normandie Occidentale** the ground is poorer and allows only



Phot. Neurdein.

THE NAVAL BASE OF CHERBOURG.

the culture of rye and buck-wheat. But there also cattle and horses are raised. The main markets are *Saint-Lô*, *Avranches*, *Coutances*.

Finally, in all the different regions of Normandy apple-trees grow splendidly : cider is the general drink, and it is also exported

Industrial, Trading and Sea-faring Normandy. — Between Western and Central Normandy, the **Seine valley** is the main thoroughfare leading from Paris to the Channel. On the estuary of the Seine, LE HAVRE (136.000 inh.), the largest harbour of France after Marseille, is the most important port of commerce between France and America.

ROUEN (124.000 inh.) stands on the Seine, above Le Havre, at the extreme point of maritime navigation, and where the fluvial navigation begins. It is the great harbour for wares coming from or going to Paris. In the district of Rouen, cloth-making was a former industry (because of the sheep raising

The natural divisions of France.

in the Pays de Caux). It is still flourishing in *Elbeuf* and *Louviers*. But American cotton was introduced into Rouen at the beginning of the XIXth century and Rouen now deals exclusively in cotton-fabrics.

Later on, iron ore deposits were discovered in the Campagne de Caen, and their exploitation has made of CAEN a large industrial centre (ore extraction, blast furnaces). It is on the way to rival the Lorraine centres. So industrial and commercial Normandy has nothing to envy agricultural Normandy for.

The last and not the meanest resource of Normandy is the sea. This resource is now busely exploited. Large fishing harbours: *Dieppe* in the Pays de Caux, *Honfleur*, on the Seine estuary, *Granville*, in Cotentin send out numerous ships to the North Sea, Iceland and Newfoundland fishing grounds. And like many other fishing harbours, such as *Trouville*, *Deauville*, *Cabourg*, they are at the same time fashionable and popular bathing places. CHERBOURG, at the further end of Cotentin, is at the same time a naval base, commanding the Channel, and port

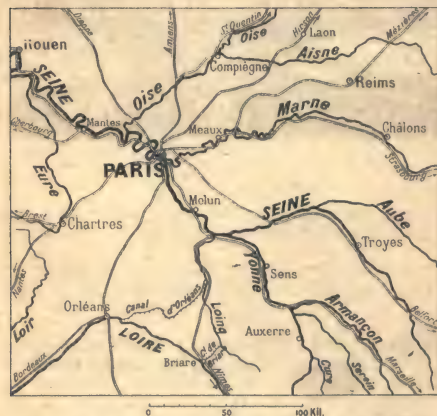
of call for America. Nearly all the big steamers put in here.

VI

PARIS AND ITS SURROUNDINGS

The surroundings of Paris.

— The surroundings of Paris cover all the interior of the Bassin Parisien. The lowest point of the basin is at 26 m. (85 ft.) altitude. Paris stands here. On the outside of the Basin, the land rises and reaches 200 m. (650 ft.)



MAP SHOWING THE CONVERGENCE OF THE WATERWAYS AND RAILWAYS TOWARDS PARIS.

altitude. From all these tablelands, the rivers descend towards the inner plain. The *Loing*, the *Yonne*, the *Marne*



A FARM-HOUSE IN BRIE.

Phot. Brodard.



THE BEAUCE.

Notice the absence of trees and meadows. As far as you can look, there are only corn and sugar beet fields. In the distance, a village, built round a well which has been dug by the community, sometimes as deep as 70 m. (230 ft.).

The natural divisions of France.

and the *Oise* all meet the *Seine* near Paris, either above or below the town.

The tablelands surrounding Paris are of two kinds: either limestone, covered with loam, which increases their fertility, or sandstone and sand. The former offer an arable soil. The latter are covered with thick forests. In some places of the limestone tablelands an underground water-level is maintained not far from the surface by a clay layer. The land is here laid out in meadows for cattle-raising. In other places, corn, beetroot, etc., are cultivated.

In the numerous valleys, the extremely fertile loam, brought down by the rivers and always kept moist, is eminently suitable for the forcing of vegetables. Fruit-trees are also maintained in great number.

The best known of these rich, green landscapes are:

1. Northward: the **Soissonnais** and **Valois** cut through by the *Oise* and *Aisne* valleys (the *Aisne* being tributary to the *Oise*). Round the cultivated plain stretch the forests of *Villers-Cotterets*, *Compiègne* and *Chantilly*.

2. Eastward: the **Brie**, cut through by the *Marne* valley and its tributaries, a limestone plain the subsoil of which is clay; so it is nearly all in meadows and woods.

3. Southward: the **Beauce**, a wonderfully fertile limestone tableland, but without any rivers or any trees. East and north of the *Beauce*, the **Gâtinais** and the **Hurepoix** (crossed by the river *Loing*) have a more clayey and sandy soil. They are pasture and arable lands, but broken by numerous small woods and one vast forest, the forest of *Fontainebleau*.

4. Westward: the **Mantois** and **Vexin**, which are very like the preceding districts and are limited on the S.-W. by the forest of *Rambouillet*.

5. The central part of the basin, called **Ile de France**. It is surrounded by the beautiful forests above-named, and the rivers, which cross it to reach the *Seine*, cut it into a number of smiling valleys.

The life of the people. — The people of the Paris region live by farming; the variety of crops which the rich soil bears and the needs of the population of the big city have fostered and intensified the cultivation of the land.

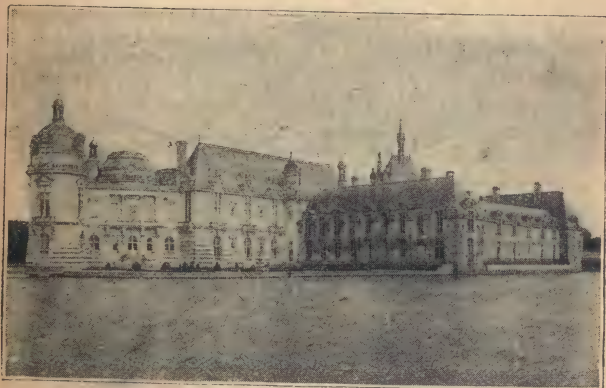
The *Beauce* and the *Soissonnais* produce corn and sugarbeet and possess great mills and sugar manufactories. The *Brie* is a cattle-raising land and produces milk and cheese. The *Ile-de-France* grows vegetables and fruit. The *Hurepoix*, the *Mantois*, the *Vexin* produce all these things together. These multitudinous resources all go to the Paris market-place (*les Halles*) or to the Paris slaughter houses (*abattoirs*).

Paris is also a source of wealth for the forest regions: the pictur-



Phot. Maten.

THE FOREST OF VILLERS-COTTERETS.



Phot. Hachette.

THE CASTLE OF CHANTILLY.

The country round Paris is full of ancient royal residences : Versailles, Fontainebleau, Rambouillet, Chantilly. The castle of Chantilly has been given to the Institut de France by the will of the Duc d'Aumale, youngest son of the king Louis-Philippe.

The natural divisions of France.

esque sites attract many town people. If a belt of industries surrounds Paris, it may also be said that an outer-belt of pleasure resorts surrounds it.

The towns of these regions have one of two characteristics they are either agricultural markets, or holiday resorts.



THE STRONG PLACE OF PARIS AND THE SURROUNDING FORTS.

Amongst the first are : *Laon, Senlis, Soissons, Creil* (iron-works) in the north; *Meaux, Provins, Coulommiers*, in the east; *Melun, Etampes, Chartres*, in the south; *Mantes, Pontoise, Dreux, Evreux*, in the west. Amongst the second are : *Compiègne, Villers-Cotteret, Chantilly*, in the north; *Fontainebleau*, in the south; *VERSAILLES* and *Rambouillet*, in the west.

Paris. — Paris, capital of France, has grown with the growth, of its master's power. The *dukes of France* became *kings* and their domination extended from the plains of the Bassin Parisien to the whole of our land. Paris is not only the political and administrative centre of France; it is also its commercial, industrial, intellectual and artistic centre.

Paris and Surroundings.

Recognising the geographical importance of Paris, we may draw the following conclusions.

1. Paris is the **great centre of attraction** for the whole of the French population. It is a **concentration point**. Navigable rivers, roads and railways coming from and going in all directions meet there. No other market town or fluvial port in French territory has a more advantageous situation in relation to the rest of the country.

Immigrants from all provinces flock to Paris : amongst the Parisian population you may meet all the different types and races of France.

2. Paris is the **first manufacturing centre** of France. Its industries are of two sorts : first, the manufacture of clothes, paper, sugar : the working of iron and the production of all articles of food : in fact, every industry that exists in other towns of France is to be found centred at Paris. Next, and still more important, what are called "industries de luxe." These are the Paris speciality and the source of its wealth. Its manufactures furniture, jewellery, fashionable dresses and the fancy goods which go under the name of "articles de Paris" have a universal reputation.

Coarse goods are manufactured chiefly in the Northern suburbs (*Puteaux, Levallois, Clichy, Saint-Denis, Saint-Ouen, Aubervilliers, Pantin*). More delicate work is executed in the town itself.



Phot. Neurdein.

PARIS. THE AVENUE DES CHAMPS-ÉLYSÉES
AND THE ARC DE TRIOMPHE.

The natural divisions of France.

3. Paris is the **greatest trading centre** of France. Its importations are mainly food-supplies, building material, fuel, raw stuffs, etc. Its exportations are principally carriages, furniture, jewels and miscellaneous clothing, millinery and fancy wares.

4. Paris has the largest population of all French cities. The town itself has only 2,888,000 inhabitants; with its suburbs it may be considered as one big town of more than 4,000,000 inhabitants.

France cannot be conceived without Paris.



PARIS AND ITS SUBURBS.

VII PAYS DE LA LOIRE

The lands round the Loire. — The southern part of the Paris basin may be divided into a number of different regions of varied soils and products. But their one great link is the Loire.

The Loire is not navigable. But its wide

valley forms a natural roadway through which the people living in the bordering regions have traded since time immemorial. This valley is besides a wide passage through which the Atlantic winds penetrate as far as the Morvan, softening the temperature.

So all these regions really depend on the Loire valley and are therefore rightly called "pays de la Loire." They have many common features.

The north side of the valley. — On the north side of the valley, the different countries are, from W. to E.: *Maine*, *Anjou*, the *Orléanais* and the *Nivernais*.

Maine is divided into two regions:

1. Westward, a tableland of granite and schist bordering the Massif Armoricain. It is very like the "Bocage Normand" and

is its southern prolongation. It is covered with woods and heaths and in the tilled parts only rye and buckwheat can grow. It is called : the *Bocage Manceau* (*Manceau* being derived from *Maine*). In the schisteous part of the *Bocage* are some very rich slate-quarries. The chief town is *Laval*.

2. Eastward is a plain of chalk and limestone. Like the *Campagne de Caen* (of which it is the southern prolongation) it is mainly occupied by pasture lands and rich fields of wheat and barley. It is called : the *Champagne Mancelle* (*Mancelle* being the feminine of *Manceau*). The valleys which cross the *Champagne* (*Maine* and *Sarthe* valleys) are well sheltered and warm ; the bottom is covered with a rich loam ; corn and maize grow there and are mainly used for the fattening of chickens. The chief town is *Le Mans*.

Anjou, which lies between the *Maine* and the *Loire*, may be divided into two parts : on the one hand the *Bocage Angevin* (*Angevin* is the adjective derived from *Anjou*), of poor soil, showing nothing but woods, pasture, lands and slate quarries (mainly in *Trélazé*), on the other, the rich land, chalk, like the *Champagne Mancelle*, but very broadly cut through by the wide valleys of the *Loire*, the *Maine* and the *Loir* : so that the most important region is not the tableland, but the bottom of the valleys, the general name of which is the *val d'Anjou*. It is often called a "jardin" (garden) because of the vineyards, orchards and flowers, which grow there in wonderful abundance. The chief town is *Angers* (83.000 inh.) standing on the border of both *Val* and *Bocage*.

The **Orléanais** stretches north of the wide curve of the *Loire* on the south side of *Beauce*. Its west side is a beautiful corn-growing plain called the "*Petite Beauce*" (small *Beauce*), with the market towns of *Vendôme* and *Châteaudun*. Eastward we find another agricultural plain, stretching up to the Parisian region, with the market towns of *Pithiviers* and *Montargis*.

Between the two agricultural plains stretches a belt of granitic sands which have been brought there at a distant geological era by the running waters coming down from the *Massif Central*. It is a barren land where rises the *forest of Orléans*, which is one of the largest forest of France, but also the thinnest. The chief town is **Orléans**, on the *Loire* (see page 70).

In the east, the **Nivernais** is very like the *Maine* and *Anjou*. The western part of *Morvan* makes part of it. It is a granitic highland, covered with forests and pastures. The people send their timber and cattle to the Paris market. To the west, plain partly clay, partly limestone, is called the *Bas Nivernais* (*bas* means *low*). On the clay are some of the finest meadows of France for the fattening of cattle. On the limestone grow some very good vines (wines of *Pouilly*). The chief town is *Nevers* on the *Loire* (see page 70).

The natural divisions of France.

The south side of the valley. — South of the Loire, from N. W. to S. E., lie the *Touraine*, the *Sologne*, and the *Berry*.

The **Touraine** is very like Anjou : a chalky tableland cut through by broad valleys : the valley of the Loire and those of its tributaries, Cher, Indre, and Vienne. These well sheltered, warm, loam-covered valleys may also be called "gardens." In fact, Touraine used to be called in the old days "*le Jardin de la France*." The rivers are bordered by rich meadows. At the foot



THE SOLOGNE.

Phot. Neurdein.

In the old times, there were only barren sand stretches and marshes. Nowadays half of Sologne has been dessicated and made healthy by pine-woods, which are afterwards transformed into fields.

of the hills are corn fields and orchards ; on the chalky, dry and warm slopes are vineyards producing some of the most celebrated French wines (*Vouvray*, *Saumur*, *Bourgueil*). In each valley stands a prosperous town : *Chinon*, on the Vienne, *Loches*, on the Indre ; *TOURS* and *Saumur*, of which we shall speak again when studying the Loire valley.

The **Sologne** is a poor land, the only poor land of the "*Pays de la Loire*." On a subsoil of clay liê granitic sands of the same kind as those of the Forest of Orléans. The land is full of pools and marshes ; its driest parts are covered with heaths. But for about sixty years, Sologne has been changing : the pools and marshes are being drained ; pine-trees are planted to make the

land more healthy and to cover the ground with vegetable mould. It is yet an unfinished work, but each year sees the corn fields, meadows and population of Sologne increasing.

The chief market towns : *Vierzon* and *Romorantin*, stand on the border.

On its south side, the **Berry** touches the Massif Central : indeed, the *industrial region of Montluçon* belongs to the Massif Central, though it is generally considered as part of Berry. In this region



Phot. Lefèvre.

THE CHAMPAGNE BERRICHONNE.

Compare this landscape to that of the plain of Champagne, and you will see the reason of the identical names.

the metallurgic industries have developed through the discovery of a local supply of fuel in the *coal-field of Commentry*.

Berry proper is surrounded in the east by the hills of *Sancerrois* (vineyards), in the west by the marshes of *Brenne* (the same kind of land as Sologne). Between them lies a vast limestone tableland, flat, dry and treeless: in fact, a Champagne; it is indeed often called: the *Champagne Berrichonne*. There are some corn-fields, but the main resource is sheep-raising. The market-towns are *BOURGES* and *Châteauroux*.

The Loire valley. — On the whole, these “pays de la Loire” are, with a few exceptions, rich countries, producing abundantly corn, fruit, wine and cattle. Between them stretches the broad, beautiful valley of the Loire, bearing different names along the course of the river: *val de Loire*, above Orléans; *val d'Orléans*, *val de Blois*, *val de Touraine*, *val d'Anjou* (*val* meaning *vale*, or wide valley). But the characteristic of the Loire valley in all its course is a wonderful fertility due to the richness of its loam.

The natural divisions of France.

It produces more corn, fruit, wine and cattle than any of the bordering regions.

But, though the river is hardly ever navigable, the valley is in the first place one of the great roadways of France. From Orléans it goes in two directions : S.-E. and S.-W. and joins the Paris region on one side to Touraine and Poitou, on the other to Berry and Limagne, this latter way leading quite up to the Massif Central.

So it is an important connecting link ; and all along the river course stand rich commercial towns : NEVERS, *Sancerre*, *Cosne*, *Gien*, ORLÉANS (72.000 inh.), *Beaugency*, *Blois*, *Amboise*, TOURS and *Saumur*. They were extremely prosperous in the bye-gone time when the Loire was navigable. But they are still wealthy, though they have not grown like towns standing by a coal-field or united to mining regions by waterways or the sea. They are middle-sized towns, prosperous in a calm way very suggestive of their exclusively agricultural surroundings.

VIII

BRETAGNE (BRITTANY)

The Unity of Bretagne. — Bretagne is the peninsular part of the Massif Armoricaïn. We have seen that the eastern borders of this highland are a number of "Bocages" (poor woody lands), whose life is dependent through trade on that of the rich agricultural countries which are their neighbours on their eastern side : for instance, in Normandy, in Maine, in Anjou ; we shall find another "bocage" south of the Loire, in Vendée (see p. 76). The usual links between *bad lands* and *good lands* exist between all these countries and their neighbours.

This is the character of Bretagne which is the western prolongation of these "bocages" and stretches, like a peninsula, between the Channel and the Atlantic Ocean. It is composed of hard, barren rocks : granite, gneiss, sandstone. The coast is much indented, the promontories and bays are numerous, as well as the small bordering islands, and many gulfs and estuaries afford extremely good shelter. The whole of the "bretonne" (1) peninsula is entirely dependent on the sea. It owes to the sea its equable and moist climate, the most *oceanic* of France : mild winters (camelias grow there freely, as in Cornwall), fresh summers, a generally cloudy sky, extremely frequent rainfalls (in Brest, there are about 220 rainy days in the year). The dominant winds come from the west north-west or south-west and generally

(1) Adjective derived from *Bretagne*.

Bretagne (Brittany).

bring in the rain. Consequently it owes to the sea its abundant streams. But to its impermeable soil it owes its numerous rivers (*Rance, Aulne, Blavet, Vilaine*), because the water all runs off the surface of the ground, not being able to gather underground in mighty sources. Mainly woods and heaths grow on the silicious soil, where it has not been bettered by the care of the inhabitants. On the whole it is a poor soil.

Inner Bretagne and the seaboard. — Bretagne is 170 km. wide (100 m.) in the east, and 100 km. (60 m.) in the west. Its



THE BRITTANY.

width is too great for the inner region to be as much interested in the sea as the seaboard.

So we must distinguish *inner Bretagne* from the *seaboard*, as do the Bretons themselves.

The **inland**, which in their language they call **Arcoat** (which means *Woodland*), is separated from the sea in the north by the highlands of *Menez*, in the south by the highlands of the *Montagne Noire* (Black Mountain) and by the *Landes de Lanvaux* (*lande* means *moor*) which are all covered with furze and broom and heather.

There are two big schisteous basins, low and wet, called the *bassin de Châteaulin* and the *bassin de Rennes*, separated from one another by the highland called *plateau de Rohan*.

The natural divisions of France.

On the highlands are forests, bocages, moors. In the valleys are green meadows and some fields where are found rye or buckwheat, and apple-trees for cider-making. There are no industries except butter and cheese-making, and milch-cows are very numerous.

The **seaboard**, called **Armor** (*sealand*) by the Bretons, backed by the highlands, and deeply penetrated by bays and gulfs, is



Phot. Neurdein.

THE VALLEY OF LE GUER, NEAR LANNION, IN BRITTANY.

This is a view of inner Brittany, called *Arcoat* (woodland) by the Bretons. This kind of plateau, made of granite or sandstone, covered with small woods, heath and brooms, are generally called *bocage* (from *bois* : wood). They are cut by valleys, whose small, regular rivers are bordered by meadows.

divided into a number of small regions where life concentrates round the local fishing harbour. They are called : *Pays de Saint-Malo* (*pays* means *land*), *Trécorrois* (which means the land round *Tréguier*), *Finistère*, *Cornouaille* (the same word as *Cornwall* in English), *Morbihan* or *Vannetais* (which means the land round *Vannes*). In all these lands, a great part of the population lives on fishing, either along the coast or in the North Sea, and off Iceland or Newfoundland. But many more inhabitants, even quite by the coast, live by farming.

The seaboard has two natural fertilizers : wrack-grass and

shells, which are in great part made of lime ; when enriched with these, the soil of the coastland can produce abundantly corn and vegetables (potatoes, onions, artichokes), while the drained *polders* at the heads of the bays and gulfs are good salt marshes for sheep and cattle.

The population of Brittany. — The people of Bretagne have long lived separated from the rest of France by the geogra-



Phot. Grayer

A HARBOUR ON THE BRITTANY COAST : SAINT-MALO.

This is a view of the coast of Brittany called *Armor* (sealand) by the Bretons. The coast is rocky and much indented. The harbour of Saint-Malo stands at the mouth of the river Rance (at the right of the picture). It was an old pirate harbour and is still surrounded by its old battlements. Nowadays Saint-Malo is the great st fishing harbour of Brittany. Its trawlers go as far as Iceland and Newfoundland.

phical character of their peninsula. So the old celtic race has remained pure, keeping. its language, habits, traditions and costumes.

On the seaboard, the population is very dense (there is a town or a village in each bay or gulf). In the inland it is more disseminated. The people live exclusively by fishing and farming. There are no factories, no industries except those connected with farming, breeding or fishing : butter and cheese-dairies, canned-fish and canned-vegetable factories.

In Bretagne there are very few large agglomerations of people. But the fa ms and hamlets are very numerous in the inland as, on the coast, the small fishing harbours. The towns are of course

The natural divisions of France.

more numerous and more peopled on the coast than in the inland.

The chief towns are : 1. Inland, RENNES (74.000 inh.), administrative capital of Bretagne, at the junction of French and Breton territory, then *Montfort, Vitré, Fougères, Redon, Ploërmel,*



THE ROAD OF BREST.

Pontivy, Chateaulin. 2. On the seaboard, *Saint-Malo*, one of our greatest fishing harbours, *Lannion, Saint-Brieuc, Morlaix*, the great naval base of BREST (90.000 inh.), *Quimper, Vannes*, and the naval base of LORIENT.

IX

THE PAYS DE L'OUEST (WESTERN LANDS)

Variety and unity of the western lands. — The western lands stretch from the Massif Central to the Atlantic Ocean and from the lower course of the Loire to the lower course of the Garonne.

Their chief common characteristic is the *oceanic climate* equable and wet, — nearly as much so as the climate of Bretagne.

But, unlike Bretagne, these lands are of extremely varied soils. Under this name of western lands go, in the N. W. the southern prolongation of the Massif Armoricaïn (highlands of *Vendée*), beyond the large valley of the *Loire Inférieure* (*inférieure* means lower); then, in the east, a wide limestone plain (plain of *Poitou*) forming a passage between the Massif Armoricaïn and the Massif

The pays de l'Ouest (Western Lands).

Central; and in the S. W. a land of hill and plateau, cut by deep valleys and edged by a seaboard formed of a number of alluvial plains (*Pays Charentais*). This means that there are four widely different countries in a region not larger than Bretagne.

The valley of the Loire Inférieure. — The valley of the *Loire Inférieure* has cut deeply and broadly through the crystalline rocks of the Massif Armoricain, but, its soil (loam), its



THE WESTERN REGION.

fields, its meadows and vineyards are the same as those of the upper valley (valley of the *Loire Moyenne*; *moyenne* means middle).

One important point of difference is that the Loire is navigable in its lower valley and ends by an estuary, where some of the biggest seagoing ships can enter. At the time when the Loire moyenne was navigable (before the year 1860), the estuaries of the Loire and the Loire-Inférieure were natural loading and

The natural divisions of France.

unloading places for the goods sent out from the central part of France to America (wine, vinegar, woven stuffs, etc.) and for those sent out from America to France (sugar, rum, tropical fruits, coffee, spices, etc.). This is what made the prosperity of the harbour of NANTES (170,000 inh.) standing on the Loire Inférieure, and as early as in the XVIIIth century an extremely wealthy trading station.

After a period of decadence, partly due to the fact that the navigation ceased on the course of the Loire, partly to the competition of the channel harbours, Nantes has now entered on a era of prosperity due to the activity of its shipowners, to the new metallurgic industries which have settled in its suburbs, and above all to the importance of its ship-building yards.

Below Nantes, on the estuary, stands the harbour of SAINT-NAZAIRE where the biggest ships stop which cannot reach Nantes.

The Vendée.—The Vendée is mainly constituted of the southern part of the Massif Armoricaïn : highlands of granite and schist, covered with woods, heaths, meadows ; it is called the *Bocage Vendéen* (*Vendéen* is the adjective derived from *Vendée*) and reminds one of the Bocages of Normandy, Maine and Anjou. During a long time it was barren and thinly populated. But in these last years, the Bocage has improved. Lime has been put into the soil and breeding is about to be started on a large scale, as well as many dairy-industries (butter and cheese making).

South of the Bocage there is a narrow belt of limestone, dry and fertile, called the **Plaine** which is one wide corn-field.

Farther South, there is a wide alluvial basin, — an ancient gulf progressively drained, — but the soil is still very watery and it bears the name of **Marais Vendéen** or **Marais Poitevin** (from Poitou, the neighbouring region). *Marais* means *marsh*.

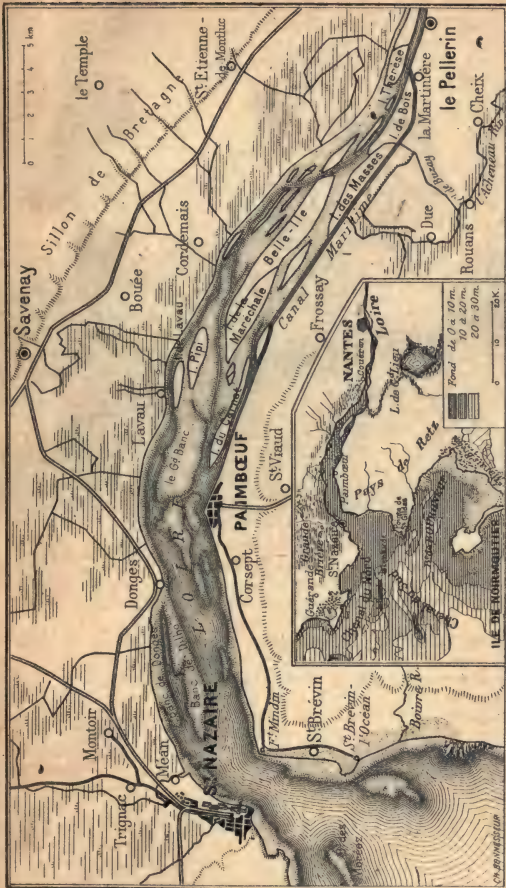
In this “ amphibious land ” (*terres amphibies*) very like the *hortillons* of the Somme, vegetables are grown with great success. On the salt meadows are raised fine herds of oxen and sheep ; nearer to the sea are salt-marshes and oyster-fields.

The coast is flat and straight, without any trading or fishing harbour.

The population is still thin in the Bocage. There is only one town : *la Roche-sur-Yon*. On the coast, one harbour : *les Sables d'Olonne*, a bathing place. But the Plaine and the Marais, are rich and densely populated. Round the Marais are a number of agricultural markets : *Luçon*, *Fontenay-le-Comte*, and NIORT, the capital of the Vendée.

Poitou. — Poitou is a low, limestone plain, which stretches between two granitic highlands. The natives set the “ *Terres chaudes* ” (warm fields) of Poitou against the “ *Terres froides* ”

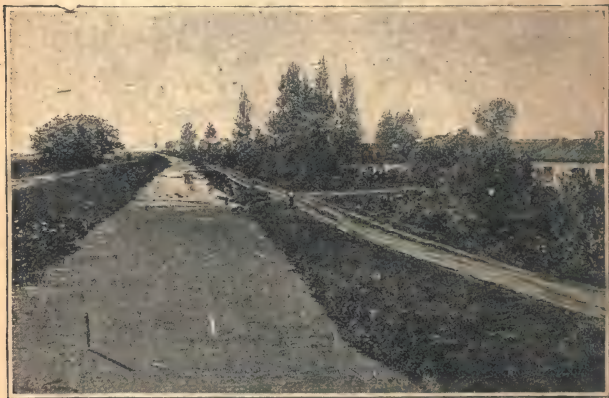
The Pays de l'Ouest (Western Lands).



SAINT-NAZAIRE AND THE LOIRE'S ESTUARY. NANTES.

The natural divisions of France.

(cold fields) of Vendée and Massif Central their neighbours. It is quite true that wherever limestone forms the surface of the ground, rich corn-fields, vineyards and pastures for the raising of cattle and mules surround comfortable farmhouses. But on some parts of the land, the running waters coming down from the Massif Central in long bygone ages, have brought a layer of



THE MARAIS (MARSH) VENDÉEN, OR POITEVIN.

Compare this view with that of the "hortillons" of the Somme. The Marais Vendéen is entirely occupied by vegetable gardens. The channels keep the soil always properly moist and are used as thoroughfares by the gardeners.

granitic sand, very like the sand of Sologne, and there you find only barren moors and woods.

But the geographical importance of Poitou lies less in its natural wealth than in its situation : it is the great intermediary region between the Bassin Parisien and the Bassin Aquitain. In the Middle Ages, the tribes coming from north or south met there and contested the possession of the French territory. A first *battle of Poitiers* was fought by the Franks led by Charles Martel against the Arabs coming from Spain (732). A second was fought by the king of France, Jean le Bon, against the English who were then settled in Guyenne (1356). In one day the great railway line going from Paris to Bordeaux crosses Poitou.

Besides a disseminated population and numerous small market-

towns, such as *Loudun*, *Parthenay*, *Melle*, *Bressuire*, *Civray*, there are in Poitou two important towns: POITIERS, the old central market, with its ancient University, which was and is the administrative centre of the region, and CHATELLERAULT, where are some cutlery works.

The Pays Charentais. — The Pays Charentais (so called from the river Charente) is a chalk plain broken by folds stretching from W. to E. and of similar shape to the folds of Picardy. As in Picardy, the rivers coming from the east and going to the sea have cut large valleys through them. On the seaboard they are broken into cliffs. Those cliffs used to overlook the sea; but the bays and gulfs have been slowly filled by the river loam, and marshes (Marais) now take their place.

The inner chalky plain bears the name of **Champagne Charentaise**. The seaboard region (hills, chalk cliffs and marshes), are called **Aunis** and **Saintonge**. Then, farther on, beyond the actual shore line, are some protruding parts of the now broken cliffs, forming the islands of *Ré* and *Oléron*: they also are surrounded by loam so that, at ebb-tide, they are nearly joined to the main-land. The heart of the region is the Charente valley, whose clear, abundant, always navigable waters flow regularly towards the sea, which they reach through an estuary.

In the "Champagne," the main production is that of wine (we are nearing the big vineyards of Bordelais, and the climate is identical). The greatest part of this is distilled and produces the well-known brandy called *eau-de-vie de Cognac*. In Aunis and Saintonge, there are some vineyards in the chalky parts, but the main resources are cattle raising, the making of butter, and oyster-rearing on the shore (*huîtres de Marennes*).

All the important towns stand on the Charente or on the coast, except *Saint-Jean-d'Angély*. On the Charente are *Ruffec*, ANGOULÊME (paper-factories), *Cognac* and *Saintes* (distilleries). On the coast stand *Marennes*, *Rochefort* (a naval base quite on the lower course of the Charente) and LA ROCHELLE, which used to be a large harbour trading with South America, and now begins a new era of prosperity since the building of its advanced port: *la Pallice*.

X.

THE MASSIF CENTRAL

The semi-unity of the Massif Central. — The Massif Central stretches over 85,000 square kilometres (32,700 sq. m.), that is a sixth of the French territory. By its altitude, it stands out from the surrounding regions; it is a highland overlooking a ring of plains. But that is its sole unity; for the climate,



Ch. Bannesseur

THE MASSIF CENTRAL.

The Massif central.

the soil, the orientation of the different valleys that belong to it, the productions, all contribute to shape out a number of regions that must be studied one by one.

The eastern part of the Massif. — In the eastern part are a number of stunted, rounded ranges composed of crystalline rocks (granite, gneiss, schist), and oriented from S. W. to N. E. Between them are lower levels following the same orientation,



Phot. Boulanger.

PASTURE-LAND IN CHAROLAIS.

The finest cattle in France is bred in Charolais. The fat oxen are sent to the slaughter houses of Paris.

which are so many passages through which the upper Loire valley communicates with the great valley of the Rhône and of its tributary the Saône.

The **massifs** (ranges) are all composed of the same rocks and they differ only by their climate.

The northern ones : the **Morvan**, the **Charolais**, the **Beaujolais**, the **Lyonnais**, have rough snowy winters ; they are covered with woods and pasture-lands. The main resource is cattle raising ; the oxen of Morvan and Charolais are reputed for the quality of their meat. In the ranges nearer Lyon (Beaujolais and Lyonnais) the general industry is the manufacture of ribbons and of velvet, cotton and linen fabrics : each village has its looms

The natural divisions of France.

working for the Lyon manufacturers. On account of these industries, the mountains are densely populated. The chief markets are *Autun* and *Château-Chinon*, in Morvan; *Semur*, *Avallon* and *Clamecy*, on the circumference of the range; *Charolles*, in Charolais; *Tarare*, in Lyonnais.

The southern ranges; the **Vivarais**, the **Cévennes**, the **Montagne**



FLOCK OF SHEEP ON ITS WAY TO SUMMER PASTURE-LAND, CROSSING THE PASS OF SEYRREDE (CEVENNES).

The climate of the Cévennes is Mediterranean, that is hot and dry and no cattle can feed on the thin grass. So the farms of the plain of Bas-Languedoc own only sheep; during the summer they sent them up to the mountain. Before winter they come back to the plain.

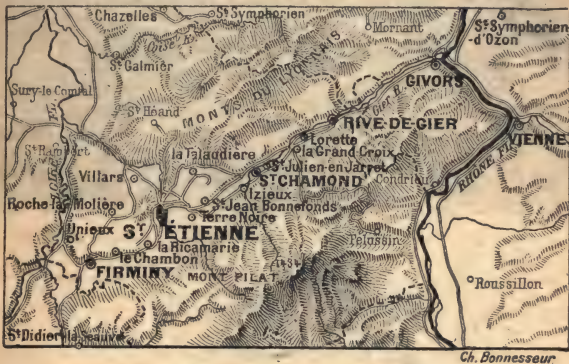
Noire (Black Mountain), are under the influence of the Mediterranean sea: the climate is drier, the woods thinner and the pastures lands poorer. Instead of oxen, only sheep are put to graze there during the summer months: they come up from the hot plains of Languedoc, where they return during the winter. On the lower slopes, corn and vines are cultivated; but the chief production is that of silk, for the mulberry thrives in this climate and silk-worms are bred on the leaves. The silk is spun in the neighbourhood of the silk-worm nurseries (*magnaneries*) and is sent to be woven in Lyon. The towns are: *Privas* and *Aubenas*, in Vivarais; *le Vigan*, in Cévennes; *Lodève* and *Saint-Pons*, in the Montagne Noire.

The lower regions are much more important than the ranges, first, because the roads and railways uniting the eastern to the western part of France cross them; but chiefly because, in these old low-lands (*synclinals*) are coal-fields, the richest ones (one might say the only rich ones) in France after the great Northern coal-field. Numbers of great iron-works have settled round these coal fields and are engaged in the manufacture of machine, nails, the iron components of ships, guns and arms. Numerous towns and manufacturing centres, all close to one another, make of these regions real "industrial" thoroughfares.

There are three coal-fields, from N. to S. :

1. The **Creusot basin**, between Morvan and Charolais, where are the greatest iron works of France, in *Le Creusot, Montceau-les-Mines, Montchanin, Blanzay*.

2. The **Saint-Etienne basin**, between Lyonnais and Vivarais, where, besides the iron-works, are silk-weaving factories, and looms for the making of ribbons and cotton-stuffs, imported



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THE SAINT-ETIENNE BASIN.

from the region of Lyon. The chief centres are SAINT-ETIENNE (148,000 inh.), *Firminy, Rive-de-Giers*.

3. The **Alais basin**, at the foot of the Cévennes, (chief town Alais), is less important than the former.

The Central part of the Massif. — In the Central part of the Massif, as well as in the eastern, are some granitic ranges.

The natural divisions of France.

more woody in the North, more barren in the South, suitable only for the breeding of a few cattle and sheep : *Monts du Forez*, *Monts du Livradois*, *Monts de la Margeride*, *Monts Lozère*. These are the poorer and less thickly peopled parts of the region.

But there are two elements of wealth which attract the population :

1. Some ranges are composed of **volcanic rocks** : lava and basalt.



LE PUY, IN VELAY.

The town stands in the middle of a basin surrounded by ancient volcanoes. It is overlooked by two enormous eruptive rocks : in the middle the *Rocher-Corneille*, surmounted by a statue of the Virgin, and on the left the *Roc Saint-Michel* or *Aiguille* (needle), on which stands a very ancient chapel.

So they are extremely fertile, and the breeding, both of slaughter oxen and of milch cows, can be carried out on a large scale. Their old volcanic origin (though the actual volcanoes have long been extinct) shows itself by the numerous hotwater sources to which many invalids resort : the sources of *Mont-Dore*, *la Bourboule*, *Royat*, *Châtel-Guyon*, *Vichy*.

2. Certain **broad plains**, partly or wholly covered with volcanic loam brought down by the rivers which water them abundantly (*Loire*, *Allier* and their tributaries), are warm, fertile, and highly productive of corn, beet-root and fruit.

The association of these two elements has made the prosperity and wealth of two regions : *Velay-Forez* and *Auvergne*.

The plains and mountains of **Velay** and the broad plain of **Forez**, in the north, have many industrial resources besides breeding : lace-making in Velay ; important cotton-weaving factories in Forez. The chief towns are *le Puy*, *Yssingeaux*, in Velay ; *ROANNE* and *Montbrison*, in Forez.

The mountains and plains of **Auvergne** are even richer.

In the mountains of the **Haute-Auvergne** (*Aubrac*, *Cantal*, *Mont-Dore*, *Mont-Dome*) are excellent pasture-lands where the oxen of *Salers* are bred and the cheeses of *Cantal* are made. The main markets are on the circumference of the mountains : *Aurillac*, *Mauriac*, *Murat* and *Saint-Flour*.

The great plain of **Basse-Auvergne** also called **Limagne**, is one of the most fertile plains in France : corn, sugar-beet, vines, vegetables and fruit flourish. Many articles of consumption are manufactured in this region : sugar, dried fruits, jam, marmalade. The chief agricultural markets are *Brioude*, *Issoire*, *Riom*, *Gannat*. The pure water of the mountain torrents have given birth to many industries round the mountains : of cutlery in *Thiers*, of paper in *Ambert*. **Clermont-Ferrand** (65,000 inh.), the capital of Auvergne standing on the border of *Mont-Dome*



Ch Bonnesseur

THE MOUNTAINS OF AUVERGNE.

The natural divisions of France.

and Limagne, is not only the greatest agricultural market of Auvergne, but also the first rubber-making centre of France.

North of the plains of Forez and Limagne stretches the plain of **Bourbonnais**, opening towards the Berry, and containing the confluence of Loire and Allier. Along the course of these rivers, intensive farming and breeding can be practised on the river-loam; but the granitic sands (which have given to the rest of this plain the name of *Sologne Bourbonnaise*) produce only woods and



Phot. Lévy.

PASTURE-LAND IN HIGH AUVERGNE, AT THE FOOT OF PUY DE SANCY.

heath, broken by marshes and pools, and quite unsuited for any sorts of tillage.

The capital of Bourbonnais, **MOULINS**, is important because it stands at the crossing of roads and railways going from N. to S. (Paris-Nîmes-Marseille) and from W. to E. (Nantes-Lyon).

The western part of the Massif. — The western part is constituted by a slightly undulating granitic tableland, called the **plateau du Limousin**. The highest point is in the centre, near the Haute-Auvergne (*plateau de Millevaches*) and it slopes gently down north, west and south, draining off its water fanwise towards the Loire, the *Cher*, *Creuse*, *Garlempe*, *Vienne*; towards the Atlantic Ocean, the *Charente*, and towards the Garonne, the *Vezère*, *Corrèze*, *Dordogne*.

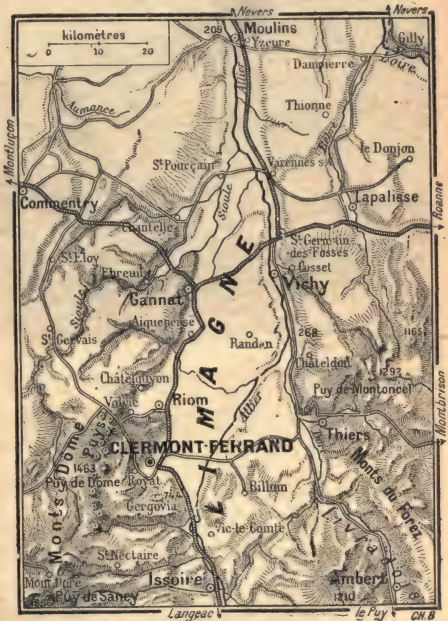
The Massif central.

This barren land bears only heather and sweet-chestnuts, grows some potatoes and supports a few sheep. But in its less cold and more sheltered valleys, are some good pastures where oxen can be fattened, as in Morvan and Charolais.

Most of the towns standing on this plateau are agricultural markets of small importance, such as : *Guéret, Bourgneuf, Boussac, Bellac, Ussel, and Brive*. The latter one stands in a small southern basin, warmer and better sheltered, and is surrounded by corn fields and orchards.

On the plateau are two medium sized and one large trading and industrial town. The two former are *Aubusson*, in the *Marche*, where the ancient industry of carpet-making survives, and **MONT-LUÇON**, on the northern border of the range, where the neighbourhood of the coal-field of *Commentry* and of some iron ore in the soil of some parts of Southern Berry have given birth to a few iron-works.

The chief trading and industrial town is **LIMOGES** (92,000 inh.) which owes its importance to : 1. cattle trade and the dependent leather industries, tanning and shoemaking ; leather-dressing, shoe-making, etc.; 2. its porcelain and enamel factories, supplied with kaolin and porcelain clay from the soil of adjacent regions; 3. its standing (like Moulins) at



THE LIMAGNE.

The natural divisions of France.

the crossing of roads and railways uniting North to South (Paris-Toulouse) and West to East (Bordeaux-Lyon).

The southern part of the Massif. — South of the Massif are the *Causses*, broad limestone tablelands called in the east the *Grands Causses* and in the west the *Causses du Quercy*. They flank a central tableland of granite called the *Rouergue*.



THE COAL-FIELDS OF THE MASSIF CENTRAL.

which has drained through the plateau soil. So they are well-watered and fertile: they grow corn as well as vegetables and fruit-trees. The population is numerous: besides farming, the people derive some profit from the flocks of sheep bred on the tableland. Two dependent industries are the making of cloth and of ewe-milk cheese (Roquefort).

The chief towns are in the valleys of the Grands Causses; *Millau*, *Mende*, *Florac*, *Sainte-Affrique*; in the Causses du Quercy, *Cahors*.

In the *Rouergue*, the impermeable granitic soil is covered with more abundant grass, which big cattle can graze. As in Limousin, there are numerous sweetchestnut groves. In the well-sheltered valleys deeply cut through the plateau soil, like

In the *Causses*, the soil is extremely permeable, full of funnel shaped holes, called *avens*. It is a very dry soil, covered with thin grass; but this grass is aromatic, so that it is a good food for the numerous flocks of sheep which during the summer come up from the neighbouring valleys and plains. But the deep valleys, cut through the tableland by the *Tarn*, the *Aveyron*, the *Lot* and their tributaries, receive from springs the water

The Bassin Aquitain.

the valleys in the Causses, are numerous orchards. The chief markets are *Rodez* and *Villefranche-de-Rouergue*. In the North,



A CHEESE-CELLAR IN ROQUEFORT (IN THE CAUSSES).

Only sheep and goats graze on the Causses pasture lands. The cheese called *Roquefort*, after a village of the Causses, is made of a mixture of ewe and goat milk, and entirely manufactured in the cool cellars cut into the thick limestone strata.

a small coal field near *Decazeville* has given origin to some iron-works.

XI

THE BASSIN AQUITAIN

Uniformity of the Bassin Aquitain. — The large Parisian basin, with Paris at centre, is varied : between Normandy and Champagne, Picardy and the lands of the Loire, there are countless number of differences of soil, of relief, of subsoil and of climate. This brings about a variety of production, from

The natural divisions of France.

which Paris derives a good part of its prosperity. On the contrary, the Bassin Aquitain is uniform.

Uniform relief : The plain of the Bassin Aquitain slopes down gently and regularly from a height of 130 m. (425 ft.) to the sea-level.

Uniform seaboard : The coast is straight and flat ; there are



THE BASSIN AQUITAÎN.

only two important indentations : the *estuary of the Gironde*, and the *bassin d'Arcachon*.

Uniform climate : The climate is warm, because the Bassin Aquitain is in the South of France; and it is generally wet, because the Atlantic winds bring the rain-clouds right up the basin without meeting any hindrance.

Uniform river-system : The Garonne crosses the basin in its middle part, from S. E. to N. W. and drains the water of nearly

all the rivers coming down from the Pyrénées or Massif Central. There is only one river, the *Adour*, which takes some part of the drainage-water of the Pyrénées straight to the sea.

Uniformity of production : The subsoil of the Bassin Aquitain is mainly composed of layers of limestone, of clay (called *mollasses*) and of loam ; there are no important mineral resources (save for one exception). Farming is the general occupation with certain industries deriving from it.

In all this uniformity, the only variety to be noted is brought about by the different degrees of fertility of the different soils, which causes the variety in the production of the fields.

The north-western terraces. — In the N. E. stretch some chalk or limestone terraces backed by the Massif Central. They are called : the terraces of the **Périgord**, of the **Bas-Quercy**, of the **Albigeois**, and of the **Lauraguais**.

Both limestone and chalk are permeable : consequently the surface of the ground is dry ; it is covered with meagre meadows, serviceable only for sheep-breeding ; this region can be compared to the Causses, though the climate is warmer. In some places, where the waters formerly coming down from the Massif Central have spread out a surface layer of granitic sand, grow some woods. These woods are a double source of wealth to the land, for in them are found *truffles* and the mushrooms called *cèpes*.

All these terraces have been cut into sections by the valleys of the great right-hand tributaries of the Garonne : the *Dordogne* and the *Isle*, the *Lot*, the *Tarn* and the *Aveyron*. In these well-watered valleys, the bottom of which is covered with a thick layer of loam, corn can be grown, but the main cultivation is that of vegetables and fruit. The only industrial region stands on the border of Albigeois and Massif Central, round the town of Albi ; there are here some iron-works and glass-making factories dependent on the coal-field of *Carmaux*.

Nearly all the other towns stand in the valleys : **PÉRIGUEUX**, *Ribérac*, *Bergerac*, *Sarlat*, *Nontron*, in Périgord ; *Gourdon*, in Bas-Quercy ; **ALBI** and *Gaillac*, in Albigeois ; *Castelnaudary* and *Castres* in Lauraguais.

The southwestern tablelands. — In front of the Pyrénées stretch two tablelands : a high and a low. The high one is the *plateau de Lannemezan*, bordered by the hills of *Armagnac* : the low one is the *plateau des Landes*.

The **Lannemezan** and the **Armagnac** are composed of the stones, pebbles and gravel of the morains brought there in the Ice Age by the glaciers of the Pyrénées. This kind of soil is of course extremely permeable. So there is no surface-water, and the land is very dry. Only the valleys, which spread out fanwise towards the *Adour* and the *Garonne* (*Gers*, *Save*, *Baise*), are humid. There

The natural divisions of France

are some meadows in the depths, and on the slopes some maize fields. The hills and the higher parts of the tableland are almost barren. But in the lower and warmer parts of Armagnac there are some vineyards, the wine of which is distilled into the famous brandies called *eaux-de-vie d'Armagnac*.

The population is scanty and lives mainly in the valleys, where there are some small towns such as AUCH, old capital of



Phot. Neurdein.

SHEPHERDS IN THE LANDES.

In the old days those shepherds, walking on their stilts, were the only inhabitants of the Landes. Notice in the distance one of those "pinèdes" (pinewoods) whose plantation has dessicated the land, made it healthy and brought wealth to it through the selling of timber and rosin.

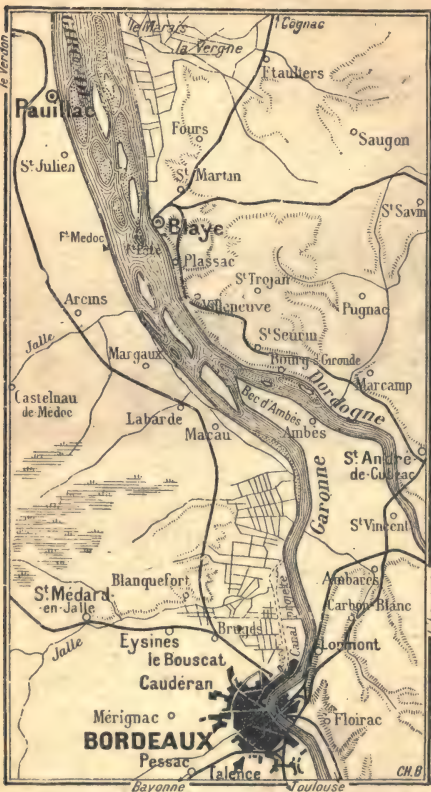
Gascogne (as the land stretching from Armagnac to Agenais used to be called), *Condom, Lectoure, Lombez, Mirande*.

The Landes are a low tableland, sloping gently towards the sea, where it ends in a straight shore-line bordered by dunes and shallow lakes (*étangs*). The ground of the Landes is entirely sandy; but in the subsoil the sand forms a kind of hard and impermeable conglomerate called *alios*. So this country used to be all marshes and poor lands. The only possible resource was sheep raising. The population was very thin.

But, in the last fifty years many marshes have been drained, and large forests of pine-trees have been planted. The pine-

The natural divisions of France.

The Garonne crosses these three regions; it is scarcely ever



BORDEAUX AND THE GIRONDE.

navigable; but along it runs the *Canal des Deux-Mers*, and the railway line of *Bordeaux-Cette* follows the valley. It is the great trade route between the Atlantic Ocean and the Mediterranean Sea, crossing the *Seuil de Naurouze* which is the doorway joining the Garonne valley to the *Bas-Languedoc*.

These regions, at once productive and commercial, are densely populated, especially along the course of the Garonne; either on the river or not far from it stand numerous towns: *Montauban*, *Moissac*, *Agen*, *Nérac*, *Marmande*, *La Réole*, *Libourne*. Then there are two large towns whose place is pre-eminent in France:

1. **TOULOUSE** (149,000 inhab.), standing in the centre of the most fertile re-

gion, the ancient capital of **Languedoc** (which used to stretch down to the Mediterranean); 2. **BORDEAUX** (261,000 inhab.),

The Pyrénées.

ancient capital of **Guyenne**, one of the first harbours of France. It is the great export harbour for wine, pine-timber



Phot. Terpercau.

THE DOCKS OF BORDEAUX.

and rosin. The principal part of the trade between France and South America, Morocco and Senegal passes through Bordeaux.

XII

THE PYRÉNÉES

The French Pyrénées. — It has already been said that the Pyrénées separate France from Spain. These newly folded mountains, not much eroded, form a high and uninterrupted barrier between the two countries. Everywhere, but especially in the Central Pyrénées, the passage from France into Spain is difficult.

On each side of the crest of the range, the two landscapes and the natural resources are very different.

I. **Differences in the relief.** — On the French side there are a number of narrow ranges sloping abruptly over the plains of the Bassin Aquitain. On the contrary, on the Spanish side are a

The natural divisions of France.

number of broad uplands, descending like stairs from the high summits to the plain of Aragon.

2. **Differences of climate.** — The *ranges of the Central and Western Pyrénées* are traced from N. W. to S. E., so that the valleys of the French side receive the winds of the Atlantic, towards which they open out, while those of the Spanish side open out landward, towards the Iberian peninsula. In the western and



THE PYRÉNÉES.

central part of the range the French side receives an abundant rainfall : the streams, waterfalls and glaciers are more numerous than on the Spanish side.

It is different in the *Eastern part of the Pyrénées*, for there the ranges extend from S. W. to N. E., and in the Mediterranean region the rainy winds blow from the S. E., so that the Spanish side is more watered and more grassy than the French, which is dry and barren.

The Western Pyrénées. — The Western Pyrénées must be studied apart, not only because they stand at one end of the range, but because they are under the influence of the ocean.

The consequences of these two primary facts are : 1. they are lower and more accessible than the Central part of the range : 2. they are better watered and more fertile than the Eastern and Central part of the range.

These two features are very striking in the part nearest the sea, called the **Pays Basque**. The mountains of the Pays Basque can be crossed through fairly practicable passes ; one of them is the well-known *col de Roncevaux*, where Roland, the nephew of Charlemagne, fell in a great battle fought against the Saracens (or Arabs) who occupied Spain.

The consequence is that the Basque people have settled on both slopes of the mountain, French and Spanish. In the same way the *Kingdom of Navarre* used to stretch on both sides. The Basques, Iberian by origin, were settled there a long time before the Celts came into Gaul ; they have kept their language (*euskara*) and all their old customs. The picturesque villages stand in the river valleys called *gaves* (*Nive, Gave de Mauléon*), which descend the mountain side bordered by rich meadows. The people live by the breeding of cattle, horses and mules,



CAUTERETS, IN THE PYRÉNÉES.

Surrounded by high peaked mountains, the valleys of the Pyrénées have very abrupt slopes and a narrow bottom. They are not much peopled, save where thermal waters spring from the ground. Cauterets is one of those watering places.

The natural divisions of France.

and in the lower and warmer regions, they grow maize and vegetables.

The same Basque population is found on the seaboard, in the numerous harbours established in the numerous indentations of the coast. But the greater part of the Basque fishermen have migrated to South America (Argentine Republic and Uruguay), and the harbours have been transformed



Phot. Brun.

THE PLAIN OF ROUSSILLON AND THE TOWN ELNE.

The plain of Roussillon is flat, well sheltered, warm and covered by a fertile loam. It is full of olive-trees, mulberry-trees, peach-trees, orange-trees. But the vineyards hold the greatest place. The wines of Banyuls and Rivesaltes have some reputation.

into bathing places ; the best known are *Biarritz*, *Saint-Jean-de-Luz* and *Hendaye*.

The land stretching East and North of the Pays Basque is called the **Béarn**. There the mountains are high and the plains are broad. The river valleys (*Gave d'Oloron*, *Gave de Pau*, *Adour*) join the mountains to the plains. In the mountainous parts, the population is scarcer than in the Pays Basque, because the climate is harsher, and access more difficult. These people live solely by cattle raising. On the contrary, in the low, fertile, well watered plains, the growing of the vine, and of maize and the breeding of fowls are successful and the population is dense. The chief towns stand in the river valleys, at the junction

The Pyrénées.

of high and low land : PAU, Oloron, Orthez. There is one good commercial harbour on the Adour : BAYONNE.

The Central Pyrenees. — The highest and broadest part of the range forms what is called the Central Pyrénées. There are few passes (or *ports*), and these are very high and hardly practicable. In the inner part of the mountains are found wide circular depressions, called *cirques* (circuses) or *oules*, almost entirely shut in. In the same way, the valleys, which have been deepened and broadened by the glacial erosion of the ice age, are shut out nearly completely from the plains. So that all the well sheltered part of the mountain, where human settlements are possible, have practically no communication with the rest of the world. Besides the climate is very severe ; in some points the level of perpetual snow is found at 11,800 m. (5,900 f.), and at a lower altitude only some woods and a thin grass can grow.

Of course in these highlands the population is scanty. In each circus (*cirque de Gavarnie*, etc.), in each valley or *val* (*Val d'Aran*, in Spain, *Val d'Andorre*, an independent republic) lives a small community, isolated and independent. Its resources are the breeding of mules, sheep and goats. The only towns which have developed are thermal stations (*Cauterets*, *Luchon* and *Lourdes*, the resort of pilgrims).

But a number of lower ranges form a series of steps leading down



PORT-VENDRES, ON THE MEDITERRANEAN SEA, AT THE FARTHEST EASTERN END OF THE PYRÉNÉES.

The natural divisions of France.

from the high mountain towards the Bassin Aquitain. The main ones are : the *Petites-Pyrénées de l'Ariège* and the *Planturel*. Here the climate is soft ; breeding is more successful ; in summer many herds are sent up from the plains. In the valleys corn can be grown ; and in the soil there is some iron-ore, which has given birth to prosperous iron-works. In these regions the towns are numerous and fairly rich : the chief ones are *TARBES*, *Bagnères-de-Bigorre*, and *Argelès* ; *FOIX*, *Pamiers*, *Saint-Gaudens* and *Saint-Girons*.

The Eastern Pyrénées. — Like the Western Pyrénées, the Eastern Pyrénées are lower than the central part of the range. There also the passes are lower down and more numerous ; they are easier to cross, and as in the Western Pyrénées the valleys open out on the French side on a plain called **Roussillon**.

But there is one great difference between these two regions : the Western Pyrénées have an oceanic climate, while the Eastern Pyrénées have an mediterranean climate. Therefore the latter are much warmer and much more dry. The mountainous part is nearly treeless ; it is mainly pasture land of meagre grass, where only sheep can thrive ; they come up from the plain each summer. But the valleys (*Tech*, *Têt*, *Aude*) are warm and sheltered, and admit of farming ; corn and barley, maize, olive trees and vineyards are to be found there.

In the plain of Roussillon, any kind of cultivation is possible (olive trees, mulberry trees, orange trees, vines), but all are subordinated to vine growing (wines of *Banyuls* and *Rivesaltes*).

Like the western mountains, those are peopled on both slopes by the same race : the **Catalans**. The purest types are found in the high valley of the *Cerdagne*. The chief towns stand either in the plain, like *PERPIGNAN*, or on the border of plain and mountain, like *Prades* and *Cérets*.

Along the mountainous region, the coast is much indented and forms many natural harbours ; one of these, *Port-Vendres*, is now an important trading station between France and Algeria.

XIII

THE ALPS

General remarks. — The French part of the Alps is on the whole much higher in altitude than the French Pyrénées. Yet man has found there easier and more numerous ways of living, in consequence of the structure of the country :

1. The French Alps are composed of a number of ranges going from North to South. The highest ranges are near the Italian frontier : they dominate the *plain of the Pô* by many thousands



The natural divisions of France.

of metres. On the contrary, towards France, the ranges of these *high Alps* (called **Hautes-Alpes**) are bordered by another system of lower and broader ranges, sloping gradually down to the *Rhone valley*; these are called the **Prealps**, or *low Alps* (**Basses-Alpes**). They do not reach the level of perpetual snow and glaciers; they are covered with vegetation and with human habitations right up to their highest summits.

2. Between the high Alps and the Prealps are a number of **longitudinal valleys**, which make natural thoroughfares between the northern and southern parts of the range. A number of **transversal valleys** cut through the Prealps and the High Alps, and facilitate communication between West and East, from the Rhone valley right up to the passes leading down towards Italy.

These valleys were entirely filled by glaciers during the ice age, and have been much deepened and widened; so that their sides have now a gentle slope, and the bottom is flat, broad and sheltered. It is occupied by well watered meadows, where breeding can be successfully carried on, as well as all kinds of agriculture. On the high part of the slopes are large forests of fir trees; higher still, between the forests and the level of the perpetual snow, are summer grazing lands, called *alpages*.

On the whole the Alpine range, though very high, is favorable to human settlement and intercommunication; but these advantageous conditions are markedly modified by the variations of climate, which may be observed in going from North to South, from the lac de Genève to the Mediterranean Sea.

The historical life of the land is an embodiment of these differences: all through the ages the French Alps have been divided into *Savoie*, *Dauphiné* and *Provence*: these political divisions follow a natural division, which we shall use here.

The Alps of Savoie. — The Alps of Savoie are the farthest North. To them belong:

1. **In the higher Alps**: the ranges of *Mont-Blanc* (4.810 m., 15.777 ft.), of the *Vanoise*, of the *Grandes-Rousses*;

2. **In the Prealps**: the ranges of the *Chablais*, of the *Bornes*, of the *Bauges*.

The high valley of the river Isère is called *Tarentaise*, and the valley of a tributary, the Arc, is called *Maurienne*; they wind their way between the different ranges of the high Alps. These valleys lead up to the passes called *col du Petit Saint-Bernard*, *col du Mont-Cenis*, *col du Fréjus*. Other valleys separate the different ranges of the Prealps; in those valleys are two lakes: the *lac d'Annecy* and the *lac du Bourget*.

In this high northern part of the Alps, the climate is very severe. The glaciers are numerous (the best known is the *Mer de Glace* near the Mont-Blanc). Perpetual snow is found at a level of 2.300 m. (7.544 ft.). But streams are very abundant, so that this

The Alps.

part of the Alps owns the best alpages and the best valley meadows. The raising of cattle and all the milk industries are extremely prosperous. The people go up with their cattle during the summer, and at the approach of winter they go down into the valley back to their village. They spend their winter days in the making of various small articles, such as woodcarved trifles, toys, watches; or else the men go away to the big towns (Paris



Phot. Neurden.

THE GRAND SOM IN THE CHARTREUSE RANGE.

or Lyon chiefly), to work in the harder callings (chimney sweeping, etc.).

The towns all stand on the outer border of the range, or in the valleys: on the border are *Thonon* and *Saint-Julien*; in the Pre-alpine valleys are *Bonneville*, *Annecy* and *CHAMBÉRY*; in the high valleys are *Albertville*, *Moutiers* and *Saint-Jean-de-Maurienne*.

In the old days each valley was a small independent political community; the feudal masters of one of these valleys, the **earls of Savoie**, helped by the numerous roads, extented their power over all the neighbouring valleys; they even crossed the passes and conquered the plain of the Pô and a good part of Italy. The house of Savoie reigns over Italy to-day, but the primitive earldom of Savoie has belonged to France since 1859.

The natural divisions of France.

The Alps of Dauphiné. — They form the Central part of the Alpine range, and they be divided into :

1. The ranges of *Belledonne*, of the *Pelvoux*, of the *Champsaur*, of the *Devoluy*, in the **High Alps**;

2. The range of the *Chartreuse*, the tablelands of *Bas-Dauphiné* (lower Dauphiné), the ranges of the *Vercors*, of the *Diois*, in the **Prealps**.

Between the high ranges are a number of valleys : the valley of the *Romanche*, called *Oisans*, and the system of valleys, called *Briançonnais* formed by the tributaries of the higher *Durance*. These valleys lead up to the passes called *col du Mont-Genèvre* and *col de Larche*. The lower valley of the *Isère* and the valley of the *Drôme* are in the **Prealps** ; and the **High Alps** and **Prealps** are separated by the deep, broad and fertile valley of the middle *Isère*, named **Grésivaudan**, which may truly be called the heart of *Dauphiné*.

These mountains, situated in a lower latitude, are under the *Mediterranean* influence, which penetrates through the valley of the *Rhône* and the valleys of its tributaries right up into the heart of the farthest ranges ; the winters are milder than in *Savoie*, and the summers much warmer.

But the highest ranges, and even some of the **Prealps** (the farthest North) are covered with snow during the winter ; this snow, melting gradually during spring and summer, gives birth to numerous sources ; the *alpages* and meadows are covered with good grass, the forests are thick. Going southward you find that the climate grows more and more *Mediterranean*, that is, more and more dry ; the sources are rarer and more irregular, the forests are thinner, the *alpages* poorer. It is the transition from green and moist *Savoie* to dry *Provence*.

The people live in the well sheltered and watered valleys. In the *Grésivaudan* the population is extremely dense, for in the loam-covered plain the meadows are irrigated as well as the fields, and any kind of farming can be done (corn, fruit-trees, etc.). In *Oisans* and *Briançonnais* cattle raising is as much developed as in *Savoie* ; yet many inhabitants of these valleys migrate to *Central America*, mostly to *Mexico*. In the last few years the wealth of *Dauphiné* has much increased through the putting into use of what we call in French the *houille blanche* (white coal) : that is, the water-power of mountain torrents. Factories have been built everywhere : electric transmission of power and energy is becoming general and puts into movement many paper-mills as well as some iron-works (in *Allevard*).

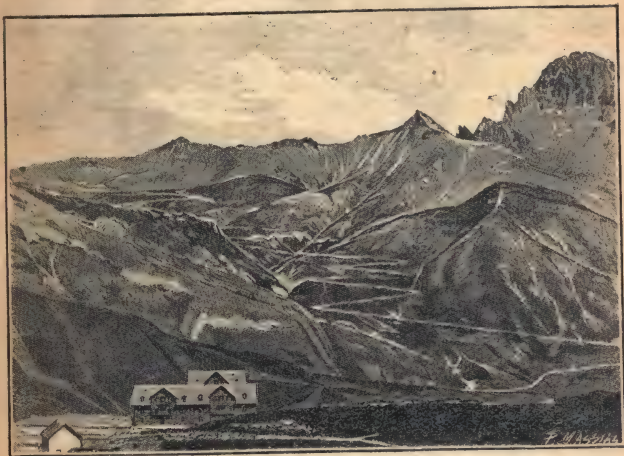
In the mountainous parts, the towns are few in number and of little importance : such are *Gap*, *Briançon*, *Embrun*. In the **Prealps** they are richer and more active : such are *La Tour du Pin*, *Voiron*, *Saint-Marcellin*, *Romans*.

In the *Grésivaudan* stands the capital of *Dauphiné*, **GRENOBLE**

The Alps.

(77,000 inhab.) : it is an important trading city and industrial centre, becoming every day more active and wealthy with its leather-works, glove-making, shoe-making, weaving, paper-making, etc.

The **Dauphiné** was united to the Kingdom of France at a very early time, for the Grésivaudan was a natural road of penetration.



Phot. Boulanger.

THE WINDING ROUTE FROM LAUTARET TO GALIBIER, IN THE ALPS OF DAUPHINÉ.

Since the XVth century it was the apanage of the eldest son of the King; that is why this prince used to be called the *Dauphin*.

The Alps of Provence. — The Alps of Provence may be divided as follows :

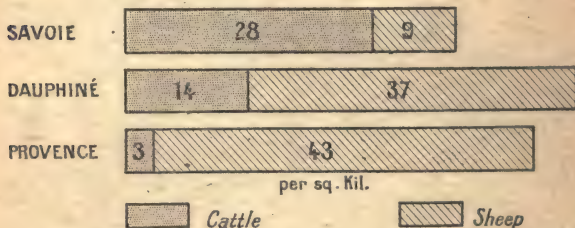
1. **In the High Alps :** the *Hautes-Alpes de Provence* (High Alps of Provence) and the *Alpes Maritimes* (Maritime Alps);
2. **In the Prealps :** the *Basses-Alpes de Provence* (Lower Alps of Provence). There is besides a granitic and porphyreous highland which borders the seacoast and is not of alpine origin, but the same as that of the great highland of Corsica : it is called the range of the *Maures* and of the *Esterel*.

The valleys which separate these different ranges are more

The natural divisions of France.

narrow and have steeper slopes than the valleys of Savoie and Dauphiné. The rivers have a more irregular course; they overflow during the winter and go dry during the summer. Neither on the bottom nor on the slopes of these valleys can any good flat building sites be found; so there are practically no villages. The field cannot be easily tilled nor the meadows properly adapted to breeding. Besides these valleys do not lead up to easily attainable passes; so they are much less populous than the valleys of Savoie or Dauphiné. The main ones are those of the *Durance*, the *Ubaye*, the *Bléone*, the *Verdon*, the *Argens*, the *Var*.

The climate is quite mediterranean, that means very hot during the summer, and very dry. The grass of the high pasture-



CATTLE AND SHEEP COMPARED IN THE ALPS OF SAVOIE, DAUPHINÉ AND PROVENCE.

lands is poor, and sheep only can be put to graze there. The eastern slopes are parched dry, few types of vegetation being able to stand the heat. These slopes are called the *adret* by the Provençals. The opposite slopes, looking northward, are called the *hubac*; they bear some forests. The villages are always built on the *hubac*, sheltered from the sun, while in Savoie the greatest number of villages are built in the places most exposed to the sun.

The population is scarce and lives from the growing of a few vegetables and fruit-trees and from the raising of sheep, which are sent to the high pasture-lands during the summer. There are in the valleys some small and poor towns: *Barcelonnette*, *Sisteron*, *Castellane*, *Digne*, *Forcalquier*, *Draguignan*, *Briannes*, *Puget-Théniers*.

The Alps of Provence are the dead part of **Provence**. The plains of the lower Rhône and the Mediterranean seaboard are the wealthy part of this beautiful province, which will be studied later on.

XIV

THE JURA

Physical features. — There are no other mountains in France better adapted to human settlement and to trade than the Jura.

The relief is not high (highest altitude : 1,720 m., 5,551 ft.). The highest ranges are found on the Swiss side : in France there are only broad tablelands of low altitude, called *plateau de Nozeroy*, *plateau de Lons-le-Saulnier*, *plateau de Champagnole*, *plateau d'Ornans*. Longitudinal valleys separate these tablelands; they are called *vals*: *Val-romey*, *Val Saint-Imier*, *Val Travers*. They are well sheltered; in the bottom is a layer of fertile loam, so they offer good settling ground. The passes, by which the ranges are crossed, are not high, and the ranges themselves are frequently interrupted by deep cuttings, called *cluses* (*cluse du Doubs*, *cluse de Nantua*, *cluse d'Ambérieu*, etc.), through which the valleys communicate with each other by road and railway.

The soil of the Jura is composed mostly of permeable limestone. The ground is full of holes, called *empoioux*,



THE JURA.

The natural divisions of France.

through which the rainwater penetrates ; it gathers into mighty underground sources, which come to light either on the slopes or at the bottom of the valleys, where they fill with a fairly regular flow the following rivers : middle *Rhône*, *Valserine* and *Ain*, tributaries of the *Rhône* ; *Doubs*, tributary of the *Saône*.

The altitude of the *Jura* is so low that neither perpetual snow nor glaciers are found there, but nevertheless the climate



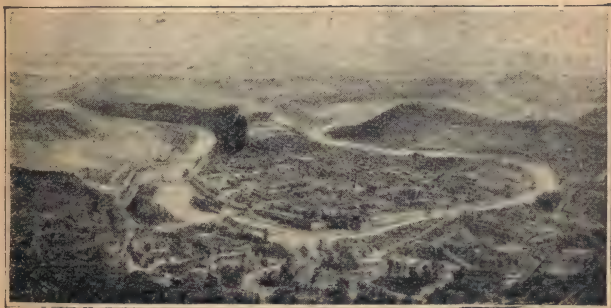
Phot. Boulanger.

NANTUA, IN THE JURA.

The town of Nantua has been built on a « *cluse* » which crosses one of the ranges, and through which passes the road. The charming lake occupies part of the *cluse*.

is severe, being more continental than oceanic. But the resources are numerous and varied, for the limestone is fertile and the water abundant. The valleys, tablelands and ranges of various heights form a kind of stairway of which the vegetation marks the steps : the vine grows up to about 400 m. (1,300 ft.) ; the corn reaches 700 m. (2,300 ft.) ; above, up to 1,200 m. (3,900 ft.) are beautiful forests of fir-trees, and above, right up to the highest summits, are good grazing lands.

The population of the Jura. — Because of its varied cultivation and many ways of communication the Jura is thickly peopled for a mountainous land. The mean density of population is 57 per sq. k. (148 per sq. m.). The inhabitants have been there from very ancient times. In the Middle Ages the land was divided into *comtés* (counties or earldoms): southward was the *Bugey*; northward was the **Franche-Comté**



Phot. Renardet.

BESANÇON.

The town is surrounded by a meander of the river Doubs. It is an important strong place.

(Free County), which used to stretch over both highland and neighbouring lowland (see "*The Plain of the Saône*"). Apart from this old political division, one can observe another economical division and (going from West to East) study one after the other, three regions, from the plain of the Saône to the high mountain. These regions are less and less densely peopled as you proceed towards the East.

1. The **Revermont** (which means "the edge of the range") overlooks the plain of the Saône. It is a comparatively low region, where the vine is cultivated (wines of *Arbois*) as well as corn and some maize, which is used in fowl-breeding.

2. In the Centre, the **Plateaux** (that is the tablelands) are already higher. Corn is cultivated there and on the rich meadows graze extremely good milch cows, and the making of cheese (called *Gruyère* and similar to the Swiss article) is a general occupation. There are also some fine forests of fir-trees, which have given birth to many wood-industries: saw-mills, paper-mills, the making of wooden clocks, etc.

The natural divisions of France.

3. In the east, the **Montagne** (that is the Highland), also called *Region of the Chains*, is too high a region to admit of farming. But it is a pasture and forest land, and you find the same industries connected with milk and wood as on the Plateau. Besides, the people, being kept at home during the long cold winter months, have practised, since remote times, all sorts of home industries, such as the making of wooden toys, and various parts for watches and clocks. Two of these industries have undergone a change and from home industries have become factory industries : watch and clock-making and manufacture of celluloid articles (celluloid having superseded wood in the fabrication of various objects such as boxes, combs, toys, etc.).

Most of the towns of Jura stand of course on the Revermont and not in the high mountain. They keep in touch with the plain of the Saône. These are : BESANÇON (57,000 inhab.), capital of Franche-Comté, Montbéliard, Baume-les-Dames, Poligny, Lons-le-Saunier. But there are also some towns in the highland, either in the *cluses* along the roads : for instance, Pontarlier, Nantua, Ambérieu; or in the valleys, young manufacturing towns, which have grown round the factories : for instance, Saint-Claude, Morez (watch-making) and Yonnax (celluloid).

XV

THE BASSIN RHODANIE

Physical features. — The Bassin Rhodanien is elongated and narrow ; it has neither a great width, like the Bassin Parisien and the Bassin Aquitain, nor the harmonious variety of the former, nor the uniformity of the latter. It is fragmentary : that is, made of many widely different regions, which the mighty Saône-Rhône waterway binds together.

Each of these regions is too small to have an independent economical life. So the life of each is narrowly dependant on the life of a neighbouring region, and the two together form an economical whole. We have already seen an instance of this in the ties that bind Franche-Comté to Jura. Bourgogne, Provence and Languedoc will show us many other cases.

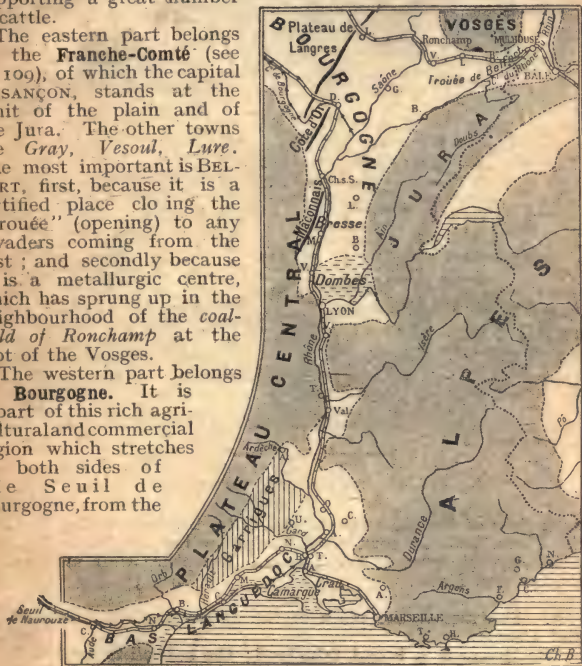
But the great commercial highway which crosses the Bassin Rhodanien from north to south is so important that all the regions standing along its course have long been used to trade together. The town of Lyon has become the centre of these commercial relations and can be considered as the Metropolis of the Bassin Rhodanien, as Paris is the Metropolis of the Bassin Parisien.

The plain of the Saône. — The plain of the Saône is an elongated basin, stretching from north to south along the course of the river Saône.

1. Its northern extremity is called the high plain of the Saône. It stretches from the trouée de Belfort to the Seuil de Bourgogne, and it is mostly covered by sandy deposit brought from the Vosges by the torrents of a remote geological era. There are some fine forests, such as the *forest of Cîteaux*; a great many meadows, more numerous than the cornfields, and supporting a great number of cattle.

The eastern part belongs to the **Franche-Comté** (see p. 109), of which the capital BESANÇON, stands at the limit of the plain and of the Jura. The other towns are *Gray*, *Vesoul*, *Lure*. The most important is BELFORT, first, because it is a fortified place closing the "trouée" (opening) to any invaders coming from the east; and secondly because it is a metallurgic centre, which has sprung up in the neighbourhood of the coal-field of *Ronchamp* at the foot of the Vosges.

The western part belongs to **Bourgogne**. It is a part of this rich agricultural and commercial region which stretches on both sides of the *Seuil de Bourgogne*, from the



The natural divisions of France.

Saône to the Yonne. Its heart is the famous *Côte-d'Or* (Golden crest) which overlooks the Saône and on its steep slope grow the vineyards yielding the famous *vins de Bourgogne* (Burgundy wines). The capital of Bou gogne is DIJON (76.000 inhab.); it is the



Ch. Bonnesseur

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THE TROUÉE DE BELFORT.

market-town for the wines of the Côte, the butter and cheese of the Plain, and the corn of the neighbouring limestone plateaux, which stretch towards the Yonne. The other wine markets are *Beaune* and *Nuits*.

2. Southward the plain of the Saône is divided into *Bresse* and *Dombes*.

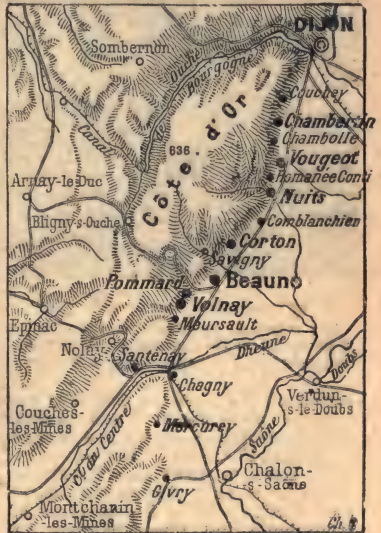
The **Bresse** is a broad tableland; the subsoil is marl, covered by a layer of rich loam. It is a warm, moist and fertile agricultural region, one of the richest in the world. The main

The Bassin Rhodanien.

cultures are those of sugar-beet, vegetables and maize, with which are fattened the renowned fowls. On the western side of the Bresse, on the other bank of the Saône stand the hills of *Mâconnais*, where excellent wine is made. The Bresse has always been united to the neighbouring part of Jura called *Bugey* (see page 109), which is a cattle raising land, producing butter and cheese; between them, those two regions form a perfect agricultural whole, the wealth of which lies in the export of its alimentary products. The main agricultural markets are *Bourg*, *Louhans*, *Chalon-sur-Saône*, *Mâcon* and *Villefranche*.

The **Dombes** is a tableland, like the Bresse; but mighty glaciers coming down from the Alps have covered this region in the ice age and have left there a layer of gravel and stones (remnants of the old morains), which makes the land barren. The subsoil is clay, so that the Dombes is full of pools breaking the monotony of the moors. During many centuries the only profitable occupation of the inhabitants was the fishing in these pools. Latterly the draining and fertilizing of the Dombes has been begun like that of *Sologne*; besides in all the villages you hear the whirr of the handlooms weaving silk or cotton for the *Lyon's* manufacturers.

Lyon. — Lyon is built on a hill projecting between the confluence of the Rhône and the Saône. It grew out of these limits in very early times. Its primitive importance was due to its standing on the great strategical and commercial routes which lead from the Mediterranean Sea to the Seine basin, from Switzerland and Italy to the Atlantic Ocean. In Lyon stood



THE VINEYARDS OF BURGUNDY.

The black circles show the most celebrated vineyards.

The natural divisions of France.

the old mileage stone from which all the Roman roads going towards Belgian Gaul and Aquitan Gaul were measured. Nowadays it is the great junction station for the Paris-Marseille, Paris-Milan, Bordeaux-Genève railways. Lyon is a fortified place and a trading market of the first rank.

But it is also an important industrial centre. Having always been in touch with the Mediterranean lands (Cévennes, Vivarais,



Phot. Ronco.

THE VINEYARDS OF THE "CÔTE D'OR" IN BURGUNDY, NEAR MEURSAULT.

The vineyards are planted on the steep limestone hill (*côte*) which form the western edge of the high valley of the Saône. All the well-known vineyards of Burgundy bear that name: Côte de Beaune, Côte de Nuits, Côte d'Or.

plains of Italy) where the silkworm was raised, Lyon became in early days the first silk-manufacturing centre in the world. The greatest part of its raw material is now brought from the Near and Far East. Besides, the Lyon manufacturers, finding their town factories insufficient, have built new ones all round Lyon, even at a distance of more than a hundred kilometres (60 miles), as far as *Roanne* (Forez), *Aubenas* (Vivarais), *Grenoble* (Dauphiné) and *Bourg* (Bresse). Lyon is the metropolis of the south-eastern part of France. It has 523,000 inhabitants.

The plains of the Rhône. — Below Lyon the Rhône crosses a narrow passage between the Massif Central and the Alps. After

this passage, called *défilé de Donzère*, the valley broadens out into a number of plains called : *plains of Valence, Montélimar, Tricastins, Vaucluse, Palus*, etc. These plains, covered with loam, are now well watered by numerous irrigating channels, filled by the water of the Rhône or of its tributaries, the Drôme



Phot. Léo et Antonin Boulade.

LYON.

Lyon is built at the confluence of the Saône (on the right of the photo) and of the Rhône; it has spread to the outer banks of both these rivers. It is one of the largest towns in France and the greatest silk manufacturing centre of the world.

and the Durance. Grapes, olives and other fruits and early vegetables (melons, tomatoes, albergin s) grow there in abundance and are sent to the great towns, mainly to Paris.

The towns of these plains were already prosperous in the Gallo-Roman time and they are full of monuments of this epoch: VIENNE, *Tournon*, VALENCE, *Montélimar*, *Orange*, *Avignon*, *Carpentras*.

The most southern of these plains and towns belong to the Mediterranean Region and Provence, which will be studied in the next chapter.

XVI

THE MEDITERRANEAN REGION

Generalities. — The Mediterranean Region, being surrounded by mountains, has only two ways of communicating with the Atlantic part of France : the *Seuil de Naurouze* and the *valley of*



Phot. Hattier.

THE BANKS OF THE GARDON, TRIBUTARY OF THE GARD.

This is a typical Mediterranean landscape. The bare hills, sprinkled with rare bushes, are called *Garrigues*. The river is nearly dry, but after any rainfall it might become a wild torrent in few hours.

the Rhône. — Consequently it is entirely under the influence of the Mediterranean Sea.

Its **climate** is excessively warm in summer, mild in winter ; the rainfalls are rare and occur only during the autumn or the winter. A hot summer wind blows from Africa (*sirocco*), and a cold winter-wind blows from the mountains ; it is called *mistral* in Provence, and *cers* or *tramontane* in Languedoc.

The **watercourses** are regulated by this climate (*Aude, Orb, Hérault, Vidourle, Ardèche, Gard, Durance, Argens, Var*). They are mostly mountain torrents, dry during the greatest part of the year, and apt to overflow, sometimes in a dangerous way ;

The Mediterranean region.

after rainfall; they sweep away from the sides of the valley the vegetal mould and the vegetation with it and carry it all down to the river mouth which, forming a delta, they gradually fill up.

The vegetation is also determined by the climate: no thick forests; only meadows, covered with a thin sun-burnt grass, clumps of small trees (mostly evergreen oaks, cork trees, cy-presses, eucalyptus and aloes) called *mâquis*. The olive-tree, the vine, the mulberry-tree, the orange-tree, melons and ornamental and sweet smelling flowers, are cultivated deeply.

The influence of the sea is also felt when studying the human



THE VINEYARDS OF THE BAS-LANGUEDOC.

The dotted part shows the vineyards.



THE VILLAGE OF GOURDON, IN THE INLAND PART OF PROVENCE.

It is a very old village and was built on those hills at a time when wars and invasions were frequent matters.

The natural divisions of France.

settlements. *Phenicians* and *Greeks* came from over the sea and created some colonies or trading stations on the coast; later on, came the *Romans*, who stamped their mark on this land more than the former occupants. When Julius Cæsar crossed the Alps, they conquered all Gaul, but they went on calling the French Mediterranean region *Provincia*, the Roman Province,

and this name still lives in the form of *Provence*. No other region of France has kept so many traces of the Roman civilisation in its literature, customs and buildings.

Bas-Languedoc. — This is the name given to the part of the land stretching from the Pyrénées to the delta of the Rhône; it is backed by the *Corbières* (first slopes of the Pyrénées), by the *Montagne Noire* and the *Cévennes*.

It is composed of:

1. A range of dry, barren, stony hills, furrowed by torrents beds, which are generally dry. They are called the **Garrigues** and edge the mountainous regions;

2 A fertile **limestone plain**, permeable and wonderfully well adapted to the Mediterranean cultivation of the olive-tree and the vine;

3. A **sea-board** along the *Golfe du Lion*, where all the deposits of the Rhône-delta are brought by an ocean current. This coast is flat and straight; a number of lagoons are separated from the sea by narrow strands of sand and communicate with it only by partly obstructed inlets called *graus*.

On the Garrigues sheep only can be put to graze; practically nobody has ever settled there. The coast is inhospitable; there



THE DELTA OF THE RHONE DURING THE ROMAN EMPIRE AND NOW.

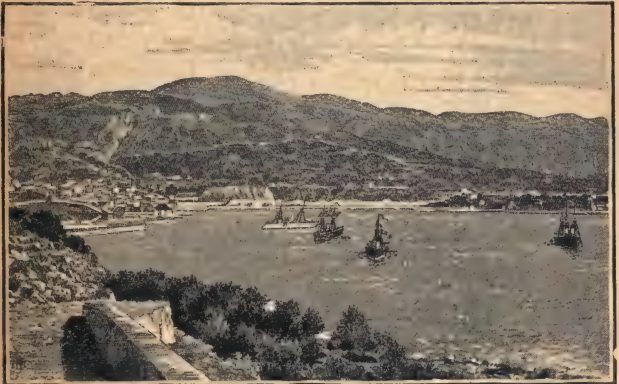
The black line shows the coastline during the Roman Empire. The dotted part shows the surface gained on the sea by the sandy deposits of the Rhône.

The Mediterranean region.

are only salt-marshes and a few villages of fishermen, who fish mostly sardines and tunnies. But in the plain, the cultivation of the vine has been highly developed : the Languedoc-wines are of an ordinary quality (the only renowned ones are the sweet wines of *Frontignan* and *Lunel*), but they are extremely abundant ; they represent $\frac{5}{7}$ of the entire French production. The population is very dense there ; most of the towns stand on what is called the *Coustière* : that is, the limit of plain and seaboard, and all are wine-markets : *Narbonne*, *Béziers*, *MONTPELLIER* (77.000 inhab.), *NIMES* (80.000 inhab.), *Uzès*.

The **Canal du Midi** comes from the Garonne, crosses the *Seuil de Naurouze* and ends in the Mediterranean Sea. It joins the oceanic and the mediterranean regions of Southern France. The town of *Carcassonne* stands on the *Seuil de Naurouze* ; the harbour of *CETTE*, a great wine-dock, has been built at the mouth of the canal.

The Provence. — Provence is divided into three regions : *Mountain*, *Plain*, *Seaboard*. The Mountain is constituted by



Phot. Prudent.

THE ROAD OF VILLEFRANCHE, ON THE PROVENÇAL COAST.

the *Alps of Provence* ; they are the poorest and most thinly populated part of Provence as of the alpine range (chap. XIII).

I. The **Plain** is divided into *Crau* and *Camargue*.

The **Crau** is a plain of gravel and sand, flanked on one side

The natural divisions of France.

by the *Rhône*, on the other by the *Durance*. It used to be dry and barren ; but since the beginning of the XXth Century it has been transfigured : irrigating-channels have been constructed, bringing everywhere the water from the Durance or the Rhône ; olive-trees have been planted, and oil has become a profitable



Phot. Neurdein.

THE TERRACES OF LA TURBIE, IN PROVENCE.

The low parallel stone walls have been built across the hill slope so as to hold back the vegetable mould, which the heavy mediterranean rainfalls would soon tear off, leaving the rock bare. On those terraces the people grow vegetables, flowers and fruits.

export; vegetables and fruits also are cultivated. Besides, large flocks of sheep live in winter in the Crau and in summer are sent away to the mountains of Provence, as far as Dauphiné.

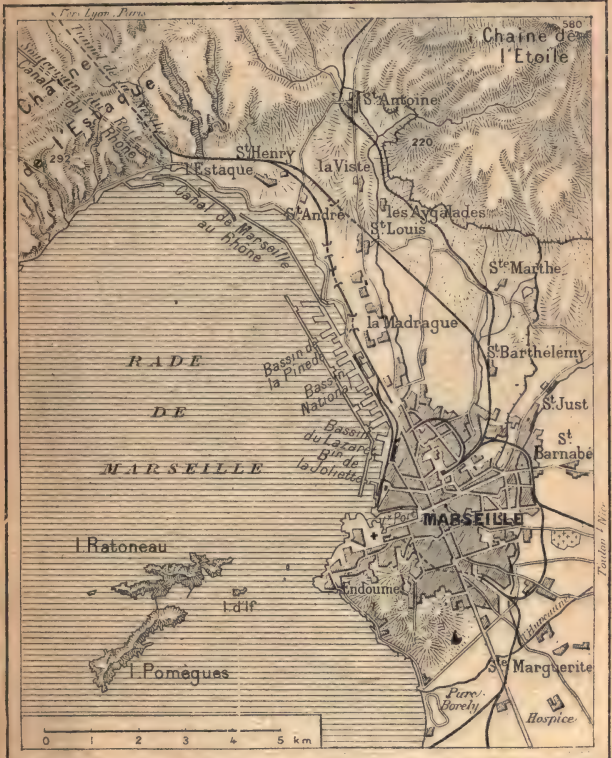
Camargue is the name given to the delta of the Rhône. It is made of the sandy deposits brought by the river ; it is not very fertile, and the greater part is marshy. In the rare grazing ground the people raise some horses and a few heads of cattle. There is a plan for transforming Camargue in the same way as Crau.

So it can be seen that it was not the agricultural richness of the land (all of this is modern) which attracted the numerous

The Mediterranean region.

population living there since ancient times, but the fact that this region is the termination of the great commercial highroad coming from the North of France.

The numerous towns (very ancient markets, called by the Romans *emporia*) are full of Roman monuments. In the Middle Ages,



THE HARBOUR OF MARSEILLE.

The Mediterranean region.

periodical fairs were held there. The railways suppressed the fairs and with them the activity of these towns, which fell asleep. But the new agricultural movement is waking them up again. The chief ones are *Tarascon* and *Beaucaire* Aix and *Arles*.

2. The **seaboard** is flat and straight along the Plain, and very much indented along the Mountain. There are innumerable bays, gulfs, and small islands, and the harbours are numerous. They have acquired importance since France has become a Mediterranean power with her colony of Algeria and the protectorate of Tunisia. The small plains opening out on the bays are backed by the mountains, which shelter them from the terrible northwinds (especially the mistral), which sweep down the Rhône valley. The winter is exceptionally mild, and all the strictly mediterranean plants grow luxuriantly : the vine, olive-tree, orange and lemon-trees, early vegetables, and flowers in abundance. Consequently the industries are the making of oil, soap and perfume.

The enjoyable climate and the picturesque beauty of the *Côte-d'Azur* has attracted many foreigners, and a great number of old harbours have become wealthy and fashionable winter-stations.

These are the three sources of wealth which the towns of this region owe to the Mediterranean sea. 1. commerce ; 2. cultivation and industry ; 3. winter pleasure resorts. The principal towns are NICE (142.000 inhab.), Grasse, Cannes, Fréjus, Hyères, TOULON (103.000 inhab.), our greatest naval base, and above all MARSEILLE (550.000 inhab.), which is the greatest harbour of France, the fifth in Europe, the seventh in the world, with a trade stretching all over the globe. The greatest part of this trade is carried on with our African colonies and with the Far East. It has also become a first-rate industrial centre for the



CORSICA.

The natural divisions of France.

manufacturing of raw materials imported from these distant lands, such as ground-nuts and ground-nut-oil, palm-oil and palm-kernels, coprah, jute, etc.

Corsica. — Corsica is an island of 8,700 square km. (3,300 sq. m.). It is one of the largest in the Mediterranean sea. It is composed of crystalline rocks, forming a range whose highest summit is 2,615 m. (8,577 ft.) high. This range slopes down towards the West, to a much indented sea-shore, bordered by small islands. On the contrary, on the eastern side, a loamy plain separates the mountain from the sea, and the shore is low, flat and marshy.

The climate is dry and warm, and going up from the seaboard to the highest summits, all the different belts of Mediterranean vegetation can be observed : at the bottom, vineyards, woods of olive, orange, and lemon-trees ; higher up, woods of sweet chestnuts and entangled bushes called *maquis* ; higher still poor *alpages*, where many goats and some sheep are put to graze.

The inland population is scarce ; the people live grouped in small villages, in a way which reminds one of the old tribal communities. But the mild influence of civilisation brings these people more and more to the seaboard, where they live on tunny and sardine fishing, and the cultivation of grapes and fruit, with a view to exportation.

There are two great harbours : *Ajaccio* and *Bastia*. Inland, there are only two small towns : *Corle* and *Sartène*.

PART III

THE FRENCH NATION

POLITICAL ORGANISATION AND COMMERCIAL LIFE

I

ORGANISATION OF THE STATE

The French Republic. — A Central organisation is the characteristic of the French Republic. All the men who direct state affairs live in the capital. Paris is the residence of the *President of the Republic*, first magistrate of the Republic, and its representative in intercourse with other States. In Paris sit the *Chamber of Deputies* and the *Senate*, the legislative assemblies. The *Ministers* entrusted with the executive power live in Paris. In Paris sit the *Cour de Cassation*, supreme Court of Justice, the *Conseil d'Etat*, which organises the lines of public administration, the *Cour des Comptes*, controlling body of the state expenditure, and the *Academies*, representing literature, science and art. Paris is the heart of the Republic.

The old administrative divisions of France. — Before the Revolution of 1789, France was divided into 33 **provinces**. After the Revolution, three new provinces were added : the *Comtat-Venaissin* (1791), the *Savoie* and the *Comté de Nice* (1861).

Each province had a marked personality due to its climate, its relief, its ground, and its productions. Its inhabitants could be easily distinguished from the inhabitants of the other provinces by their way of living, by their clothes, by their accent and sometimes by their dialect or language. Nowadays civilisation has levelled many differences ; but you can still distinguish the inhabitants of the different provinces : a Fleming is not like a Provençal, a Norman is not like an Auvergnat, a Breton is different from an Alsatian, a Savoyard from a Gascon.

Here is the list of the French provinces (the names of the capitals are between brackets).

The French Nation.

1. IN THE NORTH AND NORTH-EAST. — *Flandre* (Lille); *Lorraine* (Nancy); *Alsace* (Strasbourg); *Champagne* (Troyes); *Picardy* (Amiens); *Normandy* (Rouen); *Maine* (Le Mans); *Anjou* (Angers); *Touraine* (Tours); *Berry* (Bourges); *Nivernais* (Nevers); *Orléanais* (Orléans); *Ile-de-France* (Paris).

2. IN THE WEST. — *Bretagne* (Rennes); *Poitou* (Poitiers); *Angoumois* (Angoulême); *Aunis* (La Rochelle); *Saintonge* (Saintes).

3. IN THE SOUTH-WEST. — *Guyenne* (Bordeaux); *Gascogne* (Auch); *Béarn* (Pau).

4. IN THE CENTRE. — *Bourbonnais* (Moulins); *Auvergne* (Clermont-Ferrand); *Marche* (Guéret); *Limousin* (Limoges).

5. IN THE EAST AND SOUTH-EAST. — *Franche-Comté* (Besançon); *Bourgogne* (Dijon); *Lyonnais* (Lyon); *Savoie* (Chambéry, 1861); *Dauphiné* (Grenoble).

6. NEAR THE MEDITERRANEAN SEA. — *Roussillon* (Perpignan); *Languedoc* (Toulouse); *Provence* (Aix); *Comtat-Venaissin* (Avignon, 1791); *Comté de Nice* (Nice, 1861); *Corse* (Ajaccio).

Modern divisions of France. — The territory of France was divided in the year 1914 into 86 **départements** and a "territoire": the *territoire de Belfort* (now 89, with those of Alsace and Lorraine). A *Prefect*, representative of the Government, is at the head of each department, assisted by a *Conseil Général* (General Council) elected by the inhabitants of the department. The Prefect and the Conseil General sit in the capital of the department, called *chef-lieu*.

Each department is divided into **arrondissements**: at the head of each arrondissement is a *sous-préfet*, also representative of the government, and a *Conseil d'arrondissement* elected by the inhabitants of the arrondissement. The sous-préfet and the conseil d'arrondissement sit in a town called a *sous-préfecture*.

Each arrondissement is divided into **cantons**, each canton into **communes**. The commune is ruled by a *Conseil Municipal* (Municipal Council), elected by the inhabitants of the commune and presided over by a *maire* (mayor). There are 36,000 communes in France.

List of departments. — Here is the list of the departments, grouped approximatively after the provinces to which they belong. The name of the **CHEF-LIEU** and the names of the *sous-préfectures* follow the name of each department.

PROVINCES	DEPARTMENTS	CHEFS-LIEUX AND SOUS-PRÉFECTURES
1° In the North.		
FLANDRE . . .	Nord	LILLE. — Dunkerque, Hazebrouck, Douai, Valenciennes, Cambrai, Avesnes.
ARTOIS . . .	Pas-de-Calais . . .	ARRAS. — Saint-Omer, Boulogne, Béthune, Montreuil, Saint-Pol.
PICARDIE . . .	Somme	AMIENS. — Doullens, Abbeville, Montdidier, Péronne.
ILE-DE-FRANCE . . .	Aisne	LAON. — Saint-Quentin, Vervins, Soissons, Château-Thierry.
	Oise	BEAUVAIS. — Compiègne, Clermont, Senlis.
	Seine-et-Oise . . .	VERSAILLES. — Pontoise, Mantes, Rambouillet, Corbeil, Etampes.
	Seine	PARIS.
	Seine-et-Marne . . .	MELUN. — Meaux, Coulommiers, Provins, Fontainebleau.
2° In the West.		
NORMANDIE . . .	Seine-Inférieure . .	ROUEN. — Dieppe, Neufchâtel, Yvetot, Le Havre.
	Eure	EVREUX. — Pont-Audemer, Les Andelys, Louviers, Bernay.
	Orne	ALENÇON. — Argentan, Domfront, Mortagne.
	Calvados	CAEN. — Bayeux, Pont-Lévêque, Lisieux, Falaise, Vire.
	Manche	SAINT-LÔ. — Cherbourg, Valogne, Coutances, Avranches, Mortain.
BRETAGNE . . .	Ille-et-Vilaine . .	RENNES. — Saint-Malo, Fougères, Vitré, Montfort, Redon.
	Loire-Inférieure . .	NANTES. — Châteaubriant, Ancenis, Saint-Nazaire, Paimbœuf.
	Morbihan	VANNES. — Pontivy, Ploërmel, Lorient.
	Côtes-du-Nord . . .	SAINT-BRIEUC. — Lannion, Guingamp, Dinan, Loudéac.
	Finistère	QUIMPER. — Morlaix, Brest, Châteaulin, Quimperlé.
MAINE	Sarthe	LE MANS. — Mamers, Saint-Calais, La Flèche.
	Mayenne	LAVAL. — Mayenne, Château-Gontier.
ANJOU	Maine-et-Loire . . .	ANGERS. — Segré, Baugé, Saumur, Cholet.
	Vienne	POITIERS. — Loudun, Châtellerault, Montmorillon, Civray.
POITOU	Deux-Sèvres	NIORT. — Bressuire, Parthenay, Melle.
	Vendée	LA ROCHE-SUR-YON, — Les Sables-d'Olonne, Fontenay-le-Comte.

The French Nation.

PROVINCES	DEPARTMENTS	CHEFS-LIEUX AND SOUS-PRÉFECTURES
2. In the West. (Sequel).		
AUNIS AND SAINTONGE.	Charente-Inférieure	LA ROCHELLE. — Saint-Jean-d'Angély, Rochefort, Marennes, Saintes, Jonzac.
ANGOUMOIS.	Charente.	ANGOULÊME. — Ruffec, Confolens. Cognac, Barbezieux.
3. In the Centre.		
ORLEANAIS.	Loiret	ORLÉANS. — Pithiviers, Montargis, Gien.
	Eure-et-Loir.	CHARTRES. — Dreux, Nogent-le-Rotrou, Châteaudun.
NIVERNAIS.	Loir-et-Cher.	BLOIS. — Vendôme, Romorantin.
	Nièvre	NEVERS. — Clamecy, Cosne, Châteauchinon.
BERRY.	Cher.	BOURGES. — Sancerre, Saint-Amand.
	Indre	CHATEAUROUX. — Issoudun, Le Blanc, La Châtre.
TOURAINÉ.	Indre-et-Loire.	TOURS. — Chinon, Loches.
MARCHE.	Creuse.	GUÉRET. — Boussac, Aubusson, Bourgneuf.
LIMOUSIN.	Haute-Vienne	LIMOGES. — Bellac, Rochechouart, Saint-Yrieix.
	Corrèze	TULLE. — Ussel, Brive.
BOURBONNAIS	Allier	MOULINS. — Montluçon, La Palisse, Gannat.
AUVERGNE	Puy-de-Dôme	CLERMONT-FERRAND. — Riom, Thiers, Ambert, Issoire.
	Cantal	AURILLAC. — Mauriac, Murat, Saint-Flour.
LYONNAIS.	Rhône	LYON. — Villefranche.
	Loire.	SAINT-ÉTIENNE. — Roanne, Montbrison.
4. In the South-West.		
GUYENNE AND GASCOGNE	Gironde	BORDEAUX. — Lesparre, Blaye, Libourne, La Réole, Bazas.
	Dordogne	PÉRIGUEUX. — Nontron, Ribérac, Sarlat, Bergerac.
	Lot.	CAHORS. — Gourdon, Figeac.
	Aveyron	RODEZ. — Espalion, Villefranche, Millau, Saint-Affrique.
	Tarn-et-Garonne.	MONTAUBAN. — Moissac, Castelsarrasin.
	Lot-et-Garonne.	AGEN. — Marmande, Villeneuve-sur-Lot, Nérac.
	Landes.	MONT-DE-MARSAN. — Saint-Sever, Dax.
	Gers.	AUCH. — Condom, Lectoure, Lombez, Mirande.
	Hautes-Pyrénées.	TARBES. — Bagnères-de-Bigorre, Argelès.

PROVINCES	DEPARTMENTS	CHEFS-LIEUX AND SOUS-PRÉFECTURES
4. In the South-West. (<i>Sequel</i>).		
LANGUEDOC.	Haute-Garonne.	TOULOUSE. — Muret, Villefranche, Saint-Gaudens.
	Aude.	CARCASSONNE. — Castelnaudary, Narbonne, Limoux.
	Tarn.	ALBI. — Gaillac, Lavaur, Castres.
	Hérault.	MONTPELLIER. — Lodève, St-Pons, Béziers.
	Gard.	NIMES. — Alais, Uzès, Le Vigan.
	Ardèche.	PRIVAS. — Tournon, Largentière.
	Lozère.	MENDE. — Marvejols, Florac.
ROUSSILLON.	Haute-Loire.	LE PUY. — Brioude, Yssingeaux.
COMTÉ DE FOIX	Pyrénées-Orientales.	PERPIGNAN. — Prades, Céret.
BÉARN.	Ariège.	FOIX. — Pamiers, Saint-Girons.
	Basses-Pyrénées.	PAU. — Orthez, Bayonne, Mauléon, Oloron.
5. In the South-East.		
SAVOIE	Savoie.	CHAMBÉRY. — Albertville, Moûtiers, Saint-Jean-de-Maurienne.
	Haute-Savoie.	ANNECY. — Thonon, St-Julien, Bonneville.
DAUPHINÉ.	Hautes-Alpes.	GAP. — Briançon, Embrun.
	Drôme.	VALENCE. — Die, Montélimar, Nyons.
	Isère.	GRENOBLE. — La Tour-du-Pin, Vienne, Saint-Marcellin.
COMTAT-VENAISSIN.	Vaucluse.	AVIGNON. — Orange, Carpentras, Apt.
PROVENCE.	Bouches-du Rhône.	MARSEILLE. — Arles, Aix.
	Var.	DRAGUIGNAN. — Brignoles, Toulon.
	Basses-Alpes.	DIGNE. — Barcelonnette, Sisteron, Forcalquier, Castellane.
COMTÉ DE NICE	Alpes-Maritimes.	NICE. — Puget-Théniers, Grasse.
CORSE.	Corse.	AJACCIO. — Bastia, Calvi, Corte, Sartène.
6. In the East.		
CHAMPAGNE.	Haute-Marne.	CHAUMONT. — Vassy, Langres.
	Aube.	TROYES. — Arcis-sur-Aube, Nogent-sur-Seine, Bar-sur-Aube, Bar-sur-Seine.
	Marne.	CHALONS-SUR-MARNE. — Reims, Sainte-Menehould, Epernay, Vitry-le-François.
	Ardennes.	MÉZIÈRES. — Rocroy, Sedan, Rethel, Vouziers.

The French Nation.

PROVINCES	DEPARTMENTS	CHEFS-LIEUX AND SOUS-PRÉFECTURES
6. In the East. (Sequel).		
LORRAINE.	<i>Before 1870 :</i>	
	Meuse	BAR-LE-DUC. — Montmédy, Verdun, Commercy.
	Vosges	EPINAL. — Neufchâteau, Mirecourt, Saint-Dié, Remiremont.
	Meurthe	NANCY. — Château-Salins, Sarrebourg, Lunéville, Toul.
	Moselle.	METZ. — Briey, Thionville, Sarreguemines.
	<i>After 1871 :</i>	
	Meuse.	BAR-LE-DUC. — Montmédy, Verdun, Commercy.
	Meurthe-et-Moselle	NANCY. — Briey, Toul, Lunéville.
	Vosges.	EPINAL. — Neufchâteau, Mirecourt, Saint-Dié, Remiremont.
	<i>Before 1870 :</i>	
ALSACE	Haut-Rhin.	COLMAR. — Mulhouse, Belfort.
	Bas-Rhin	STRASBOURG. — Saverne, Schlestadt, Wissembourg.
	<i>After 1871 :</i>	
FRANCHE-COMTÉ .	Belfort (territ. of) . .	BELFORT.
	Jura.	LONS-LE-SAUNIER. — Dôle, Poligny, St-Claude.
	Doubs.	BESANCON. — Montbéliard, Baume-les Dames, Pontarlier.
	Haute-Saône.	VESOUL. — Lure, Gray.
	Ain	BOURG. — Gex, Nantua, Trévoux, Belley.
BOURGOGNE.	Saône-et-Loire. . . .	MACON. — Autun, Chalon-sur-Saône, Louhans, Charolles.
	Côte-d'Or	DIJON. — Châtillon-sur-Seine, Semur, Beaune.
	Yonne.	AUXERRE. — Sens, Joigny, Tonnerre, Avallon.

Defence. Army and Navy. — The main defence of France is its **Army**. In time of peace, this army used to be divided into two *military governments* (*gouvernements militaires*) and 21 *Army Corps* (one in Algeria). The *Head-Quarters* of the *Military Governments* were at Paris and Lyon.

1st corps H. Q. at Lille.
 2^d — — Amiens.
 3^d — — Rouen.
 4th — — Le Mans.

5th corps H. Q. at Orléans.
 6th — — Châlons-sur-Marne.
 7th — — Besançon.
 8th — — Bourges.

Roads, Railroads and Waterways.

9 th corps H. Q. at <i>Tours</i> .		
10 th	—	<i>Rennes</i> .
11 th	—	<i>Nantes</i> .
12 th	—	<i>Limoges</i> .
13 th	—	<i>Clermont-Ferrand</i> .
14 th	—	<i>Grenoble</i> .
15 th	—	<i>Marseille</i> .

16 th corps H. Q. at <i>Montpellier</i> .		
17 th	—	<i>Toulouse</i> .
18 th	—	<i>Bordeaux</i> .
17 th	—	<i>Alger</i> .
20 th	—	<i>Nancy</i> .
21 st	—	<i>Epinal</i> .

The **continental frontiers** were protected by *forts, fortresses and strong places*. Before the war of 1914, these frontiers were bordered by three neutral states, *Belgium, Luxemburg and Switzerland*, and by three non-neutral states : *Germany, Italy and Spain*.

The frontier bordering neutral states was only defended by second class fortresses, no attack from or through the neutral states being probable. In 1914, to attack France, Germany violated the neutrality of two of these states (which neutrality she had guaranteed, along with the other states). By this unfair stroke she attacked us on our weak point.

The frontier bordering Spain and Italy was only defended by second class fortresses, these states being of pacific dispositions. But on the German frontier were four first-class strong places, each surrounded with numerous forts : BELFORT, EPINAL, TOUL and VERDUN. There, the ennemy has been unable to force our lines. Our **seaboard** is defended by five great *naval bases* : *Cherbourg*, on the Channel ; *Brest, Lorient, Rochefort*, on the Atlantic Ocean ; *Toulon*, on the Mediterranean Sea. TOULON is now the base of the main part of our home-fleet, cruising in the Mediterranean Sea, while the English home-fleet has cruises in the Northern Sea, the Channel and the Atlantic Ocean, since our alliance with the British Empire.

II

ROADS, RAILROADS AND WATERWAYS

Roads. — There are 60.000 kilometers (37.500 miles) of roadways in France. It is the land possessing the best road system in the world. There are three kinds of roads (from the widest to the narrowest) : the *routes nationales* (national roads), the *routes départementales* (departmental roads), and the *chemins vicinaux* (local roads).

Waterways. — There are 13.500 kilometers (8.437 miles) of waterways (artificial or natural) in France.

The mountain regions and mediterranean regions have no navigable rivers : the first because the slopes are too steep and

The French Nation.

the rivers too rapid ; the second, because the river beds are dry or are flooded after a rainfall.

In the rest of France there are two kinds of regions, from the waterway point of view : the first where rivers and canals are numerous and all connected with each other (these regions can be entirely crossed by means of waterways) ; the others have few waterways all separated from each other.

Amongst the first are the *Northern Region*, the *Eastern Region* and the *Bassin Parisien* ; canals join all the rivers together : a barge can go from Dunkirk to Lyon or Nevers, from Le Havre to Nancy or Strasbourg.

Amongst the others are the *Western Region*, the *Bassin Aquitain* and the *Regions of the lower course of the Rhône*.

MAIN WATERWAYS OF FRANCE

REGIONS	MAIN RIVERS	MAIN CANALS	MAIN RIVER-DOCKS
I. Regions where rivers and canals are numerous and all connected			
BASSIN PARISIEN	The Seine and all its great <i>tributaries</i> , the <i>Yonne</i> excepted.	The canal de la Marne au Rhin The canal de Bourgogne (which joins the Seine to the Saône). The canal du Centre, the canal de Briare and the canal du Nivernais, which join the Loire to the Seine and to the Saône. The canal running alongside the Loire.	Paris, on the Seine. Briare, De-cize and Digoin, on the canal running alongside the Loire.
NORTHERN REGION	The Escaut (the <i>Scheldt</i>) and its <i>tributaries</i> (<i>Lys, Scarpe</i>). The Sambre. The Somme.	The Northern canals, which join all the Northern waterways to each other, and join these waterways to the Oise and the Seine.	Lille, on the Deule. Maubeuge on the Sambre. Saint-Quentin on the Somme.

Roads, Railroads and Waterways.

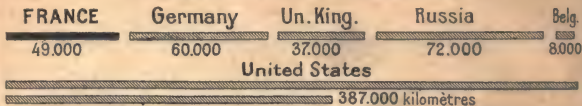
REGIONS	MAIN RIVERS	MAIN CANALS	MAIN RIVER-DOCKS
I. Régions where rivers and canals are numerous and all connected (<i>Sequel</i>)			
EASTERN REGION	The Rhin (the <i>Rhine</i>) and its tributaries (<i>Ill, Moselle</i>). The Meuse . The Saône , (tributary of the Rhône).	The above named canals of the Bassin Parisien. The canal du Rhône au Rhin , which joins the Saône (tributary of the Rhône) to the Rhine.	Nancy and Strasbourg on the canal de la Marne au Rhin. Lyon , at the confluence of the Saône with the Rhône.
II. Regions which have few waterways, separated from each other			
WESTERN REGION	The Orne , the Rance , the Vilaine , the Loire Inférieure (the lower course of the Loire), the Charente .	The canal de Nantes à Brest.	
BASSIN AQUITAINE	The Garonne Inférieure (the lower course of the Garonne) and its estuary : the Gironde . The Adour Inférieur (the low course of the Adour).	The canal running alongside the Garonne , and the canal des Deux-Mers (the "channel of the two seas," Both these channels join the Atlantic Ocean to the Mediterranean Sea.	Toulouse , at the junction of the canals here named.
REGION OF THE LOWER COURSE OF THE RHÔNE	The Rhône inférieur (the lower course of the Rhône), the mouths excepted.	The canal du Rhône à Marseille .	Beaucaire , on the Rhône.

Railway-lines. — There are 49,300 kilometers (30,800 miles) of railways in France. Compared with the surface of her territory, it is proportionately less than in Belgium or in the United Kingdom, but more than in the States. The main railway lines start from Paris and reach the farther extremities of our land. This arrangement of our railway system is favorable to the relations between Paris and the rest of France, but very unfavourable to communications between certain of our provinces.

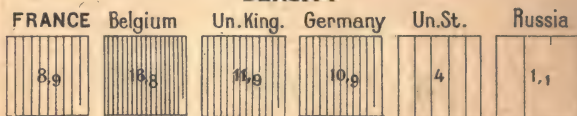
There are six lines in the French railway system : one is owned by the **State** (*l'Etat*) ; the five others are owned by **Companies** :

- 1° *the Compagnie du Nord* (Northern) ;
- 2° *the Compagnie de l'Est* (Eastern) ;
- 3° *the Compagnie Paris-Lyon-Méditerranée* (P.-L.-M.) ;
- 4° *the Compagnie de Paris-Orléans* (P.-O.) ;
- 5° *the Compagnie du Midi* (Southern).

MILEAGE OF THE RAILWAYS



DENSITY



RAILWAYS OF FRANCE, UNITED KINGDOM, UNITED STATES, ETC.

The mileage is measured in kilometers. It is to be remembered that a mile is equal to about 1 km. 6. The figures in the squares at the bottom of the diagram show the length of the railway lines (in kilometers) compared to a surface of 100 square kilometers (about 40 sq. miles).

MAIN RAILWAY LINES

LINES	M IN RAILWAY LINES	IMPORTANT STATIONS	CHARACTERISTICS OF THE REGIONS CROSSED BY THE DIFFERENT LINES
ÉTAT (THE STATE)	1° Paris-Le Havre 2° Paris-Cherbourg 3° Paris-Brest 4° Paris-Bordeaux	Rouen. Caen. Le Mans, Rennes. La Rochelle.	This railway system crosses the western part of France, joining Paris to Normandy, Brittany, Vendée and Charentes. By it, the corn and cattle, vegetables, butter, cheese, eggs and apples of this region are sent to Paris. It also joins Paris to the great harbours of the Channel and Atlantic Ocean, starting points of big steamers bound for America.
NORD (NORTHERN)	1° Paris-Calais 2° Paris-Lille 3° Paris-Maubeuge	Amiens, Boulogne. Amiens, Arras. Saint-Quentin.	This railway system crosses the Northern plains, joining Paris to the Pas-de-Calais, the North Sea and Belgium. It joins together three of the greatest industrial areas of Western Europe : 1. England ; 2. Belgium and the French Northern Region ; 3. Paris and its suburbs.

Roads, Railroads and Waterways.

LINES	MAIN RAILWAY LINES	IMPORTANT STATIONS	CHARACTERISTICS OF THE REGIONS CROSSED BY THE DIFFERENT LINES
EST (EASTERN)	1° Paris-Longwy 2° Paris Strasbourg 3° Paris Belfort	<i>Reims.</i> <i>Nancy.</i> <i>Troyes.</i>	This railway system crosses the eastern part of France, joining Paris to Champagne, Lorraine, the Vosges and Alsace. It joins together four of the richest areas of Western Europe ; 1. Paris and its suburbs; 2. the industrial region of Lorraine; 3. the Rhenish and Westphalian Basin; 4. Switzerland.
PARIS- LYON- MÉDITER- RANÉE (P.-L.-M.)	1° Paris-Pontarlier 2° Paris-Modane 3° Paris-Marseille 4° Paris-Nice 5° Paris-Cette	<i>Dijon.</i> <i>Lyon, Dijon,</i> <i>Dijon, Lyon,</i> <i>Avignon.</i> <i>Dijon, Lyon.</i> <i>Avignon, Toulon.</i> <i>Clermont-Ferrand.</i> <i>Nîmes,</i> <i>Montpellier.</i>	This railway system crosses the south-eastern part of France, joining Paris to Bourgogne and the Jura, Bourbonnais and the eastern part of the Massif Central, of the Bassin Rhodanien and the Alps. By it, the wines, vegetables and fruits of Bourgogne, of Limagne and of the Mediterranean region are sent to Paris. It also joins Paris to Switzerland, Italy, and to the great Mediterranean harbour, Marseille, starting point of the big steamers bound for North Africa, Western Africa, the Indian Ocean and the Far-East.
PARIS- ORLÉANS (P.-O.)	1° Paris-Toulouse 2° Paris-Bordeaux 3° Paris-Quimper	<i>Orléans, Limoges.</i> <i>Orléans, Tours,</i> <i>Poitiers,</i> <i>Angoulême.</i> <i>Orléans, Tours,</i> <i>Angers, Nantes,</i> <i>Lorient.</i>	This railway system crosses the central and south-western part of France, joining Paris to the fertile plains of the Loire and of the Bassin Aquitain. By it, the corn and wines of these regions are sent to Paris. It also joins Paris to the great harbours of the Atlantic Ocean, starting points of the big steamers bound for South America and Western Africa.
MIDI (SOUTHERN)	1° Bordeaux-Bayonne 2° Toulouse-Perpignan 3° Bordeaux-Cette	<i>"</i> <i>"</i> <i>Toulouse.</i>	This railway system crosses the Bassin Aquitain and the Pyrénées, joining the Atlantic Ocean seaboard to the Mediterranean seaboard. Through it is made the junction with the Spanish railway lines.

III

AGRICULTURE, FORESTRY AND FISHING

Farming. — France is one of the countries of the world in which farming can be most varied. It is also her main source of wealth. The rural population is still three to five of the whole population, and it is an extraordinarily high proportion for a modern civilized country.

The landed property is mostly in small or medium-sized holdings. If you take a hundred farmers there are :

52 owning a property of less than 5 hectares (12,5 acres);
 36 " " " of 5 to 20 hectares (12,5-50 acres);
 12 " " " of more than 20 hectares (50 acres).



COMPARATIVE MEAN PRODUCTION OF WHEAT AND WINE (1905-1914).

The figures mean millions of metric tons of wheat and millions of hectolitres of wine. It is to be remembered that a metric ton is equal to about 2205 lbs. avoirdupois, and that a quarter is equal to 2 hl., 9.

The products grown in France are of course only products of the temperate belt; but, because of the variety of climate (oceanic, continental, mediterranean) and soils, *all* the products of the temperate belt can be found in France.

Corn. — In the regions where there is no lime in the soil (Massif Central, Massif Armoricaïn, etc.), *rye* and *buck wheat* are grown. In the regions where there is lime or loam in the soil (plains of the Bassin Parisien, Bassin Aquitain, etc.), *barley* and *oats* are grown; *maize* is grown in regions that are both wet and warm.

But the main production is that of *wheat*. Everywhere in France wheat is cultivated. The production varies between 13 and 28 hectolitres per hectare (14, 3 to 30, 8 Engl. bushels per acre; 14,6 to 31,1 Amer. bushels per acre), according to the richness of the soil and the intensity of farming. The regions where the production of wheat per hectare is the highest are *Beauce*, *Brie*, *Picardy*, *Limagne*, *Toulousain* and *Bresse*.

The mean annual production of the last ten years before the war was given as 8.900.000 metric tons of wheat; there are only two countries in the world (both much larger than France) producing more wheat than France: the United States, 19.200.000 metric tons, and Russia, 15.900.000 m. t. (India, 8.760.000 m. t.).

But the French people eat a large quantity of bread, so that this quantity was scarcely enough for their need.

Other food products. — 1. Drinks. — Beer is made in the regions where barley and hops are cultivated (Northern and Eastern Regions). *Cider* is made in the regions where the apple-trees grow (Normandy, Bretagne, etc.). But France is above all a **land of vines**. She is the greatest producer of wine in the world. Her mean annual production during the last ten years before the war (1905-1914) was 52 millions of hectolitres (17.900.000 quarters); it is superior to that of Italy (43 million of hl.; 15.100.000 qu.) and that of Spain (15.870.000 hl. 5.470.000 qu.). The most renowned vineyards are in *Bordelais* in *Bourgogne* and in *Champagne* (sparkling wines). The vineyards yielding more ordinary wines are those of the *Bas-Languedoc* and of the *Pays de la Loire*. The chief brandy-making districts are *Charente* (*Fine Champagne*, *Cognac*) and *Armagnac*.

2. Sugar. — The *sugar-beet* grows successfully in all the rich loam soils of the North, of Picardy, of Beauce and of Limagne. In the last ten years (1905-1914), France has produced 750.000 metric tons of beet-sugar each year. This production comes next to that of Germany, Russia and Austria-Hungary.

3. Potatoes. — Potatoes grow everywhere, but the best crops are produced in siliceous or sandy soils, such as Bretagne and the Massif Central. The mean production of the last ten years has been 13.500.000 metric tons each year. This production comes next to that of Germany, (45.760.000 m. t.), of Russia (30.600.000 m. t.) and Austria-Hungary (18.500.000 m. t.).

4. Various. — The *olive-tree* grows everywhere in the mediterranean region, but is more abundant in Provence than anywhere else. But the production of olive-oil is very inferior to that of the other western mediterranean lands, Spain, Italy, Algeria, Tunisia.

Vegetable and fruits (apples and pears, plums and peaches, cherries and strawberries, sweet-chesnuts and nuts, etc.) grow abundantly in all France.

The French Nation.

All these products of the French soil are too abundant for the French population. So large quantities are exported into Europe and some of them (wines and brandies) all over the world.

Textiles. — No part of France being in the tropical belt, she grows neither cotton, nor jute, but she produces a good quantity of flax and hemp. In the South of France silkworms are raised. From our sheep we derive an average of 43,000 metric tons of wool a year.

But neither the flax nor the hemp we grow are sufficient for our fabrics. We produce barely 10 p. c. of the wool and 7 p. c. of the silk spun or woven in our factories.

Cattle breeding. — In the year 1914 France owned 13 million heads of cattle. In Europe the only countries owning a greater number were Russia (34 million) and Germany (20 million). The United Kingdom had 12 million, and the States 63 million. The finest slaughter-oxen are those of *Normandy, Morvan, Charolais, Auvergne, Limousin*. The finest milch cows are found in *Normandy, Bretagne, Vendée, the Charentes, Jura and Savoie*.

In the same year, France owned 14 million and a half of sheep; in Europe, only Russia (42 million), the United Kingdom (24 million) and Spain (16 million) had a greater number. Of course this number cannot be compared with that owned by the States (52 millions), the Argentine Republic (82 millions) and Australia (85 millions). The sheep are more numerous in the South of France (*Provence, Languedoc, Causses*) and in the lands of siliceous soil (*Massif Central, Bretagne*), or of chalky soil (*Champagne, Picardy*). But everywhere each farm has its flock of sheep.

In 1914 there were 3 million horses and 6 million pigs in France.

These resources were sufficient for the needs of the inhabitants of France. They had enough meat, milk, butter, cheese and a sufficient livestock. But there was not enough leather or wool to supply the factories.

Forestry. — In all anciently civilized countries where the people are numerous, the greater part of the forests have been cut down and the ground tilled. Such is the case of France. 52 p. c. of the surface of her territory is cultivated; 12 p. c. are meadows; only 18 p. c. are forests. Nevertheless, most of the mountains are still covered with beautiful forests. Only on the Pyrénées, the Alps of Provence and the Cévennes the forests have been too much thinned. In the plains, there are still some large forests: we have named those which surround Paris (*forêt de Compiègne, de Villers-Cotterets, de Chantilly, de Fontainebleau, de Rambouillet*). A great effort is being made to replant the mountains which have been denuded of trees in the South of

France; and in the Landes, in Sologne and in Champagne some large forests of pine-trees have been planted. For about 30 years, France has adopted an excellent policy in respect of the preservation of her trees.

Fishing. — Our fishing population is not so numerous in France as in Great Britain or the Netherlands, or Norway. Some of her coasts are unfavourable to the foundation of harbours, and consequently are thinly populated: for instance, the coast of the Landes and of Bas-Languedoc. Coast-fishing is practised in Provence only.

But in all the numerous harbours along the coast from the Pas de Calais to Gironde, not only coast-fishing, but also sea-fishing is practised; ships go out to the *North Sea* (herring-fishing), to *Iceland* and *Newfoundland* (cod-fishing), to *Western Africa*, from Morocco to Senegal (sardine- and lobster-fishing). In the Mediterranean Sea, sardines and tunnies are fished along the *Tunisian coast*.

The chief **fishing harbours** are: *Boulogne*, *Dieppe*, *Granville*, *Saint-Malo*, on the Channel; *La Rochelle* and *Bordeaux*, on the Atlantic Ocean.

IV

INDUSTRY

General remarks. — In 1914, France held the fourth place in the industrial production of the world, ranking after: 1. the United Kingdom; 2. the United States; 3. Germany. The great cause of this inferiority was our scarcity of coal: we produced only 4 p. c. of the coal extracted each year in the world. We were obliged to import.

It is to be noted that this want of fuel will be compensated for when all the water forces (*houille blanche*, or *white coal*) of rivers and especially of mountain torrents have been brought into use. In the Alps and Pyrénées, the water forces are just beginning to be used: the war, though a terrible evil for us, has been beneficent in this way, that it has obliged us to employ a large part of our hydraulic energy, so as to compensate for the temporary loss of our largest coal basin.

Mining. Coal and iron ore. — There is very little *copper*, *lead*, *zinc* and practically no *gold* in our subsoil. Put together, the extraction of these different ores represents about 3 p. c. of the general ore extraction of France. The rest, that is 97 p. c. represents the quantity of coal and iron ore extracted.

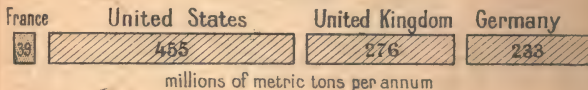
1. The quantity of **coal** extracted in France is not very large; 39 millions of metric tons each year: that is twelve times less

The French Nation.

than in the United States, seven times less than in the United Kingdom, six times less than in Germany before the war. Two thirds of this production are supplied by the *Northern coal basin*: the remaining third by the *Massif Central coal basins* (Saint-Etienne, le Creusot, Alais, etc.).

2. France produces a large quantity of **iron ore**. Before the

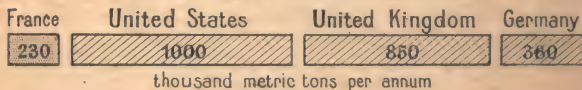
COAL



IRON ORE



COTTON *SPUN AND WOVEN*



WOOL *WOVEN*



SILK *WOVEN*.



COMPARATIVE INDUSTRIAL PRODUCTION BEFORE THE WAR.

The figures show the number of metric tons (1 metric ton = 2205 lbs. avoirdupois) and also the value in francs (1 franc = 10 d. = 20 cents; 1 dollar = 5 francs; 1 pound st. = 25 francs).

war she produced 19 millions of metric tons of ore, sometimes more, each year. This production was the third in the world, after the United States', and Germany's, and before the United Kingdom's.

Nine tenths of this ore came from the mines of *Lorraine*. *Lorraine* which was annexed by Germany in 1870 and has now come back to us, produces an average quantity of 21 millions metric tons of iron ore per annum. The mines of *Normandy*, just beginning to be put to use in 1914, may be considered almost as rich as those of *Lorraine*. There are also some mines in the *Petites-Pyrénées de l'Ariège*.

The fuel was too rare in France to enable us to work this ore. We used to export it.

Metallurgy. — Metallurgy may be divided into *smelting works* and the *manufacturing* of machines, implements, etc.

1. **Smelting works.** — We used to produce 5,500,000 metric tons of *cast iron* a year. The chief furnaces are in *Lorraine*, and produce seven tenths of the general quantity. We used to produce 4,500,000 metric tons of *steel*. The chief steel works are in *Lorraine*, in the *Northern Region* and in the *Massif Central* (Le Creusot, Saint-Etienne, etc.). It is to be noted that France produces half the *aluminium* produced in Europe.

2. **Machines, implements, etc.** — The manufactures of machines (*steam engines*, *agricultural machines*, *typewriters*, etc.), of *weapons*, of *implements*, of *rails*, of miscellaneous iron wares, were quite prosperous before the war. The main centres were in the *Northern Region*, in the basins of *Le Creusot*, of *Saint-Etienne*, of *Alais*, of *Decazeville*, of *Commentry* and in the *suburban region round Paris*, in, or round the big harbours, were the great factories for all the iron or steel parts of ships (Le Havre, Brest, Nantes, Bordeaux-Pauillac, Marseille-la Ciotat, Toulon-la Seyne).

Spinning and weaving. — The weaving industry has always been very prosperous in France. At an early time, all the textile plants of the temperate belt were already cultivated in France. (flax, hemp, etc.). She was one of the first countries in Europe to import textiles of the tropical belt (cotton, silk, jute, etc.), and to begin to weave them. Nowadays, she holds a leading place in Europe for the good quality of the stuffs she produces.

1. For **woollen stuffs** she comes next to the United Kingdom. The greatest quantity comes from the *Northern Region* (Lille, Roubaix, Tourcoing, Fourmies). *Normandy* comes next (Rouen, Elbeuf), then *Picardy* (Amiens), then *Champagne* (Reims, Sedan).

2. For **linen**, she comes next to Russia. The great linen weaving region is in the *North* (Lille, Armentières, Valenciennes, Cambrai, Calais); then comes *Vendée*, in the western region,

The French Nation.

3. For **cotton stuffs** she comes next to the States, the United Kingdom and Germany. But compared with this last country's, her production had a higher value, owing to its quality. The great cotton-spinning and weaving region is in the *North* (Lille, Roubaix, Tourcoing, Cambrai); *Normandy* comes next (Rouen), then the *Vosges*. **Cotton hosiery** is made in *Champagne* (Troyes). Lace is made in *Forez* (Saint-Etienne, Roanne).

4. For **silk stuffs**, she holds the first place. The great silk centre is in *Lyon*: all the villages and small towns of the surrounding regions work for the Lyon manufacturers (Dauphiné, Bresse, Beaujolais, Forez, Velay, Vivarais).

Stuffs, dresses and clothes represent a third of the exports of France.

Food stuffs. — The rich and varied crops of France give her abundant material for the manufacture of food stuffs. Every where are *flour mills, factories for macaroni and vermicelli making, large wine cellars, breweries*, etc. Other industries are special to different regions.

1. **Sugar** is refined in Picardy and the Northern Region;

2. **Butter and cheese** are made in Flandre, Normandy, Brittany, the western Regions, Cantal, the Causses, Savoie, Jura and Vosges;

3. **Oil** is refined in Provence, and **soap** is made in Marseille and Bordeaux;

4. **Fish and vegetables** are canned in Bretagne, in the region surrounding Nantes, in Bordeaux, etc.

Food stuffs take a leading place in French exportation.

Specialised industries. — The originality of the French industry is due to that general character of its specialised industries: the good quality and high value of the majority of our manufactured wares is not so much dependant on the raw materials yielded by our land, but on the ingenuity of our men of science, the taste of our artists, and the cleverness of our workmen. These wares are sold all over the world, and have given France her high reputation. The chief are:

1. *Motorcars and aeroplanes* (Parisian suburbs);

2. *Rubber wares and stuffs* (Clermont-Ferrand);

3. *Chemical products* (Paris);

4. *Perfumery* (Paris, Provence);

5. *Dresses and millinery* (Paris), *shoes* (Limoges), *gloves* (Grenoble);

6. *Paper* (Corbeil, Epinal, Angoulême);

7. *Porcelain and crockery* (Limoges, Nevers, Gien, Sèvres);

8. *Glass, crystal and artistic glass* (North, Vosges, etc.);

9. *Watches and clocks* (Besançon);

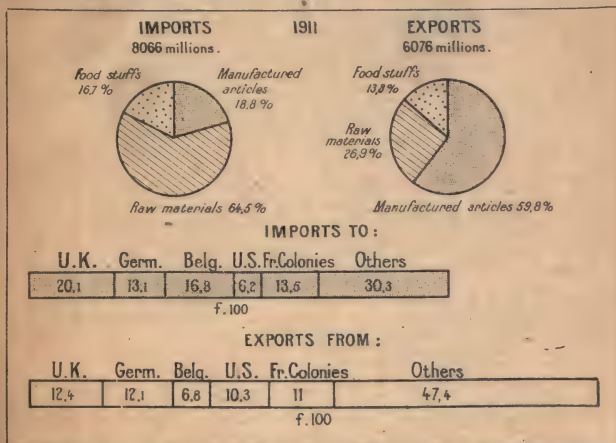
10. *Carpets* (Amiens, Beauvais, Aubusson);

11. The miscellaneous trifles called *Articles de Paris*.

V

COMMERCE

Imports and exports. — Before the war, our foreign trade reached an annual figure of 14 milliards of francs (560 million



IMPORTS AND EXPORTS BEFORE THE WAR.

pounds sterling, 2.800 million dollars). Only the United Kingdom, Germany and the United States attained higher figures.

Like the other industrial countries, France imported mainly *food-stuffs* and *raw materials*, and exported mainly *manufactured articles*. But owing to her agricultural wealth, she was able to export more food-stuffs than her neighbours in Western Europe; these food-stuffs were mainly superior articles (rare wines, butter and cheese, eggs, fruits, etc.). Also the quality of the manufactured articles she used to send out, differentiated her exportation from that of her neighbours: the United Kingdom, Belgium, Germany, Switzerland.

Here is the list of our chief imports and exports, together with their destination or origin :

The French Nation.

IMPORTS :

FROM :

FOOD STUFFS 16,7 p. c.	{	Wheat	Algeria, Russia, U. S., Argentine Republic.
		Rice	Indochina.
		Cane-sugar and rum	West Indies.
		Wine	Algeria, Spain.
		Olive-oil	Algeria, Tunis.
RAW MATERIALS 64,5 p. c.	{	Mutton	Algeria, Morocco.
		Coffee	Brazil, West-Indies, Abyssinia.
		Tea	The Far East,
		Cocoa, pepper, etc.	All the tropical lands.
		Flax and hemp	Russia, Argentine Republic.
		Cotton	U. S., Egypt, India.
		Wool	Argentine Republic, Australia,
		Silk	United Kingdom.
		Jute	Italy, the Far East.
		Leather	India.
MANUFACTURED ARTICLES.	{	Coal	Morocco, Argentine Republic, Brazil, U. S.
		Petroleum	United Kingdom, Belgium, Germany.
		Rubber	United States.
		Timber and wood pulp (for paper)	Brazil, Equatorial Africa, India.
		Oil, oil seeds and kernels	Sweden, Norway, Russia, West Africa.
		Fertilisers	Algeria. Tunis, Chile.
			United Kingdom, U. S., Belgium, Germany, Switzerland, etc.

EXPORTS :

TO :

FOOD STUFFS 13,3 p. c.	{	Wine (Champagne, Bordeaux, Burgundy)	The whole world.
		Oil	United Kingdom.
		Butter and cheese	United Kingdom, Belgium.
		Vegetables and fruits	United Kingdom, Belgium.
RAW MATERIALS 26,9 p. c.	{	Beet-sugar	United Kingdom.
		Iron Ore	United Kingdom, Belgium, Germany.
MANUFACTURED ARTICLES 59,8 p. c.	{	Linen	Western Europe, United States.
		Cloth and woollen stuffs	The whole world.
		Hosiery	d°
		Silk-wares	d°
		Machines	Italy, Spain, Africa, Asia.
		and implements	
		Soap	d°
		Motor-cars	The whole world.
		Rubber-wares and stuffs	d°
		Perfumery	d°
		Dresses and millinery	d°
		Carpets	d°
		Articles de Paris	d°

Chief customers and furnishers of France. — France used to trade mostly with her neighbours and her colonies. But she traded also with some distant countries which bought expensive manufactured goods from her and supplied her with the food stuffs and raw materials that neither her own soil or that of her neighbours produced. From this table (p. 144) and the study of statistics, the following deductions may be made :

1. The chief **furnishers of France** were : her neighbours, the *United Kingdom, Germany, Belgium, Switzerland, Italy* ; her colonies, *Algeria, Tunis, Morocco, French Western Africa, French Indochina* ; distant countries, the *United States, Russia, the Argentine Republic, Australia, China* and *Japan*.

2. The principal **customers of France** were her neighbours, the *United Kingdom* (which used to buy a fifth of the French exports), *Belgium, Germany, Italy, Spain* ; her colonies, *Algeria, Tunis, Morocco, French Western Africa, Madagascar* ; and distant countries, the *United States, Brazil, Uruguay* and the *Argentine Republic*.

It follows that our most important trade relations were with the *United Kingdom* : 20,1 p. c. of our exports, 12,4 of our imports went to, or came from there. These figures may be out-passed. And this commerce may be extended to the *British Dominions*.

10,3 p. c. of our imports and 6,2 p. c. of our exports came from, or went to, the *United States*. These figures may be doubled, even tripled, to the great advantage of both countries.

VI

FRENCH COLONIES

Surface and population of the French Colonial Empire. — The French Colonial Empire has a surface of nearly 12 million square kilometres (more than 4,500,000 square miles), that is 18 times larger than France. The population is 50 million inhabitants. In thirty years it will be a hundred. Owing to its surface and the number of its inhabitants, this colonial Empire surpasses those of the Netherlands, Belgium, Portugal (and Germany such as it was before the war). If you compare the whole of the French territory, mother country and colonies, to the whole of the British territory and to the territory belonging to the *United States*, you have the following figures :

The French Nation.

	Surface		Population
	SQUARE KILOM.	SQUARE MILES	INHABITANTS
France and colonies	11,941,000	4,537,000	97,000,000
United Kingdom and colonies. .	30,119,000	11,445,000	422,000,000
United States and colonies. . . .	9,692,000	3,683,000	112,000,000
	<u>51,752,000</u>	<u>19,665,000</u>	<u>631,000,000</u>

Put together these three Empires represent 40 p. c. of the inhabited world.

French colonies. — The following territories form the French colonial empire :

COLONIES	SURFACE		POPULATION	CAPITALS
	SQ. KM.	SQ. M.		
1° Africa.				
Algérie (Algeria).	925.000	351.500	5.563.000	Alger
Tunisie (Tunis).	125.000	47.500	1.923.000	Tunis
Maroc (Morocco).	800.000	304.000	6.000.000	Fez
Sahara.	5.037.000	1.914.400	700.000	"
Afrique Occidentale Française (Fr-West-Africa) . .	1.800.000	684.000	12.700.000	Dakar
Afrique Équatoriale Française (Fr-Equatorial-Africa). .	1.800.000	684.000	8.500.000	Brazzaville
Madagascar.	592.000	225.000	2.700.000	Tananarive
Reunion and Comores. . . .	4.600	1.750	275.000	Saint-Denis
Somalie Française (French Somaliland).	36.000	13.700	200.000	Djibouti
	11.119.600	4.225.850	38.561.000	

2° Asia.

Indochine Française (French Indochina).	705,000	267,900	18,925,000	Hanoi
Inde Française (French India).	508	193	273,000	Pondichéry
	<u>705,508</u>	<u>268,093</u>	<u>19,198,000</u>	

3° South Seas.

Nouvelle-Calédonie (New Caledonia).	21,000	7,980	62,000	Nouméa
Iles Tahiti (Tahiti Group) .	4,100	1,558	30,000	Papeete
	<u>25,100</u>	<u>9,538</u>	<u>92,000</u>	

4° America.

Saint-Pierre et Miquelon. . .	242	92	6.300	Saint-Pierre
Guadeloupe (Guadalupe) and group.	1.868	710	182.000	Pointe-à-Pitre
Martinique	988	375	207.000	Fort-de-France
Guyane Française (French Guiana).	88.000	33.400	33.000	Cayenne
	91.098	34.577	428.300	



THE FRENCH COLONIES

In general, the two great regions of French colonization are *Africa* and the *Far East*.

Products of the French colonies. — The French colonies belong either to the temperate belt or to the tropical belt.

In the temperate belt, the large colonies are *Algeria*, *Tunis* and *Morocco*; this group is called *Afrique du Nord* (North Africa). They are the most valuable to France, because they are easily attainable by the Mediterranean Sea or the Atlantic Ocean; besides, their production is extremely like that of France, because the climate of the two first is nearly the same as that of our Mediterranean region, and the climate of the last is very like that of the Bassin Aquitain. The French settlers have the advantage of not quitting their habits and climate. Besides, the natives (*Arabs* and *Berbers*) are numerous and they are clever workmen.

The corn, wine, oil, vegetables, cattle, leather, wool, alfa and cork produced in the colonies are sent to France; there is a great deal of iron and copper ore and of phosphate in the subsoil.

The French National.

The trade-figures of these colonies now reach over 1.150 millions of francs a year (46.000.000 pounds sterling, 230.000.000 dollars), and they are rapidly increasing.

2. In the tropical belt, the large colonies are : *French West*

AREA

Afr. du Nord Française	Afrique Occidentale Française	Afr. Équale Française	Madagascar	Indochine Française
1.112	6.856	1.478	592	803
thousand sq. kilometers				

POPULATION

Afr. du Nord Française	Afr. Occid ^{le} Française	Afr. Équat ^{le} Française	Madagascar	Indochine Franç ^{se}
10.5	10.6	8.9	3.1	17
millions of inhabitants				

IMPORTS AND EXPORTS

IMPORTS		EXPORTS	
521	Afrique du Nord Française	630	
59	id. Occidentale	67	id.
14	id. Équatoriale	7	id.
26	Madagascar	38	
109	Indochine Française	66	
187	other colonies	61	
millions of francs			

AREA, POPULATION AND COMMERCE OF THE FRENCH COLONIES

Africa, French Equatorial Africa, Madagascar and French Indo-china. White people cannot settle there as easily as in the first-mentioned colonies. But the native population is numerous and on the whole, industrious : this is the case with the

Sudanese and *Senegalese negroes*, in West Africa, of the *Malgaches* in Madagascar, of the *Annamites* in Indochina.

All the food stuffs and raw materials proper, to the tropical belt grow or might be grown there. At the present moment the main productions are those of rice (Indochina), rubber (Equatorial Africa), palm oil and earth nuts (West Africa). But coffee, cocoa, tea, manioc, coprah, cotton, jute and all the other plants produced abundantly by the English tropical colonies might be cultivated.

The French colonial Empire is of recent making, and it is just beginning to be productive. This large surface of land shows commercial results not more than half those of North Africa alone. But no doubt after the war, it will be one of the main producers of raw material for the future *Society of Nations*.

And during this war, the French colonies have supplied the motherland with hundreds of thousands of soldiers and workmen.

CONCLUSION

Such is France.

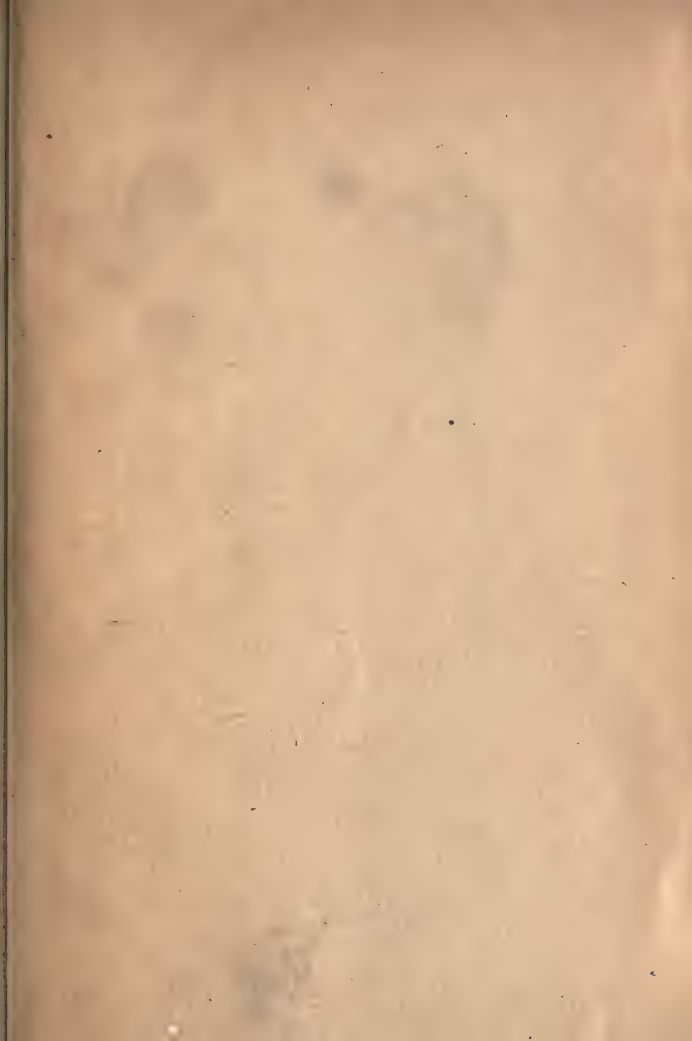
Her surface or population is not to be compared with those of the British Empire or of the United States. Her industrial power also is not so great as theirs. But still she is a great European power, though her surface is not more than 4:1.000 of the whole surface of the lands above the sea, and her population is not more than 25:1.000 of the population of the globe. She occupies one of the first industrial places; before the war her commerce was the third, her colonial empire the second in the world.

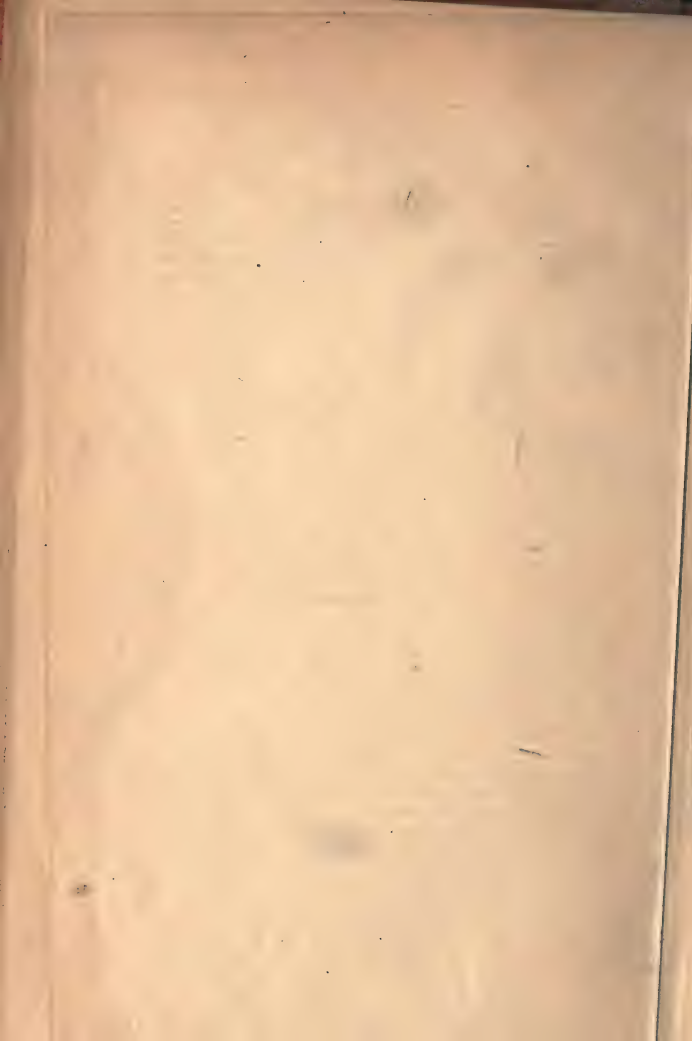
Two geographical features distinguish France from the other great civilized countries: first, the harmonious variety of her provinces, where all the shades of the temperate climate may be noted, as well as all kinds of relief, of soil, of vegetation. If you make on a "Tour de France," a journey of a thousand miles it will take you through landscapes ten times more varied than those you might see when crossing ten thousand miles of the Great Plains or of the Far West. There are more differences between Flandre and Brittany, Bourgogne and Provence than between Essex and Ireland or Scotland.

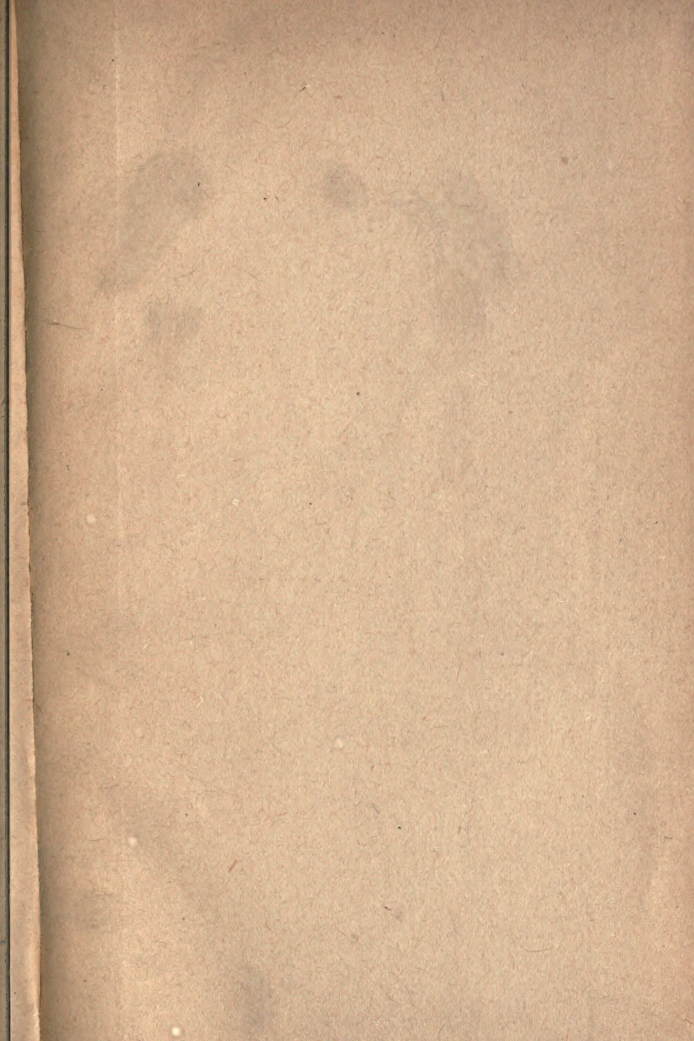
Agriculture and industry are more evenly balanced in France than in any other country of Western Europe. The United Kingdom, Belgium and Germany are mostly manufacturing countries, while Spain, Italy and the Netherlands are mostly agricultural. In France, agriculture and industry are of about equal importance; both produce articles of exportation of high quality and price: good wines, early fruits and vegetables, fashionable and costly manufactured wares.

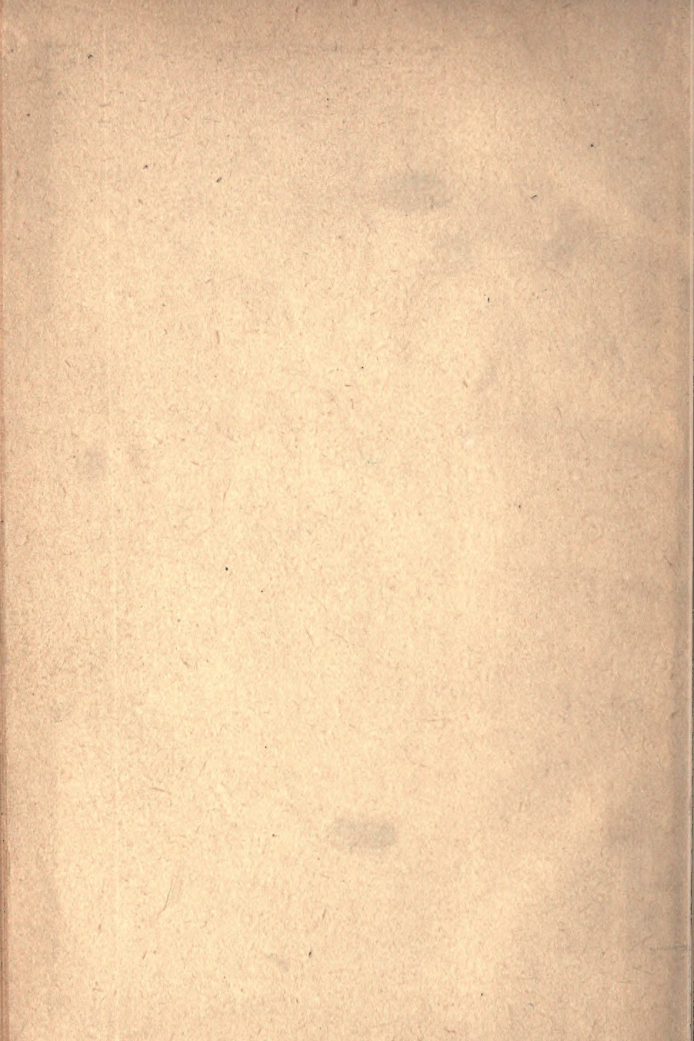
This is what makes a special place for France in the geographical review of the world. She stands between two seas, round which have been born the antique and the modern civilizations; and to-day, we may say — for it seems to be the reason why the great war has brought so many friends to help us, — that she embodies the principles of these two civilizations: their love of justice, liberty, truth and peaceful progress.

Her soil has been consecrated by the struggle of western and Latin civilization against the remnants of the old ancient barbarism.









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